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Government
Publications

DEPARTMENT OF PUBLIC WORKS, CANADA.

GEORGIAN BAY SHIP CANAL SURVEY.

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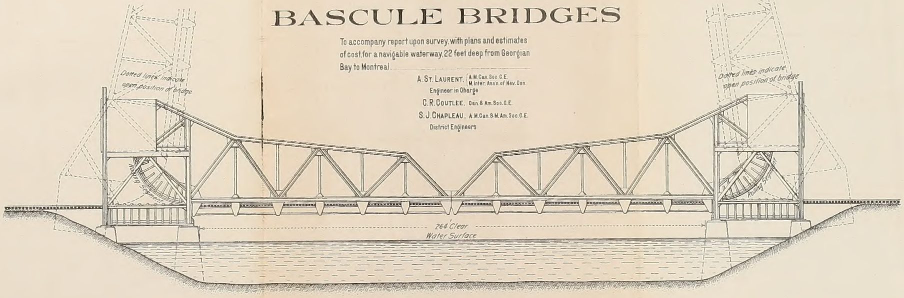
PUBLIC WORKS, CANADA.

GEORGIAN BAY SHIP CANAL

BASCULE BRIDGES

To accompany report upon survey, with plans and estimates of cost, for a navigable waterway, 22 feet deep from Georgian Bay to Montreal.

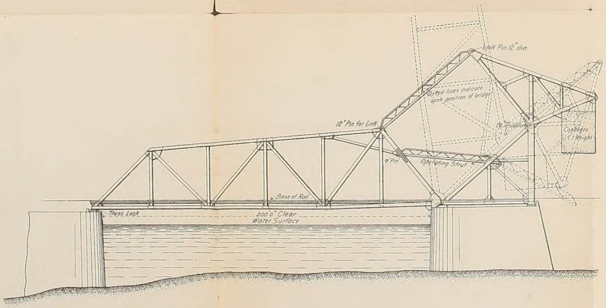
A. St. Laurent, A.M. Can. Soc. C.E., M. Inter. Ass'n. of Nav. Con.
Engineer in Charge
C. R. Coutlee, Can. & Am. Soc. C.E.
S. J. Chapleau, A.M. Can. & M. Am. Soc. C.E.
District Engineers



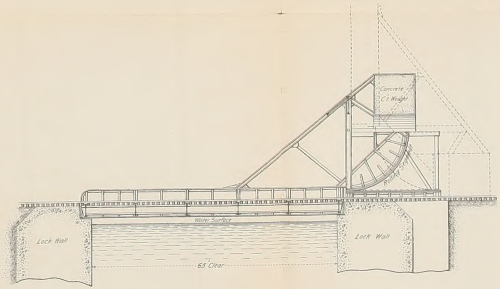
Double Span Bridge

LIST OF BASCULE BRIDGES REQUIRED

Locality and Name of Bridge	Length of Clear Span	Width	Site in Plate No.	Description
MAIN ROUTE				
Victoria, Montreal........	160	55	4	Double Track and Double Highway
Verdun Lock............	65	20	4 & 39	Highway
C. P. Ry., Lachine........	200	25	4	Double Track
G. T. Ry., Ste. Anne......	65	25	4 & 40	" "
C. P. Ry., "	65	25	4 & 40	" "
Pte. Fortune Lock........	65	20	5 & 40	Highway
C. N. Ry., Hawkesbury....	200	25	5	Double Track
Canal "	200	20	5	Single Track and Highway
Hull Lock No. 1..........	65	20	7 & 42	Highway
" "	65	25	7 & 42	Double Track, C. P. Ry.
" No. 2.........	65	25	7 & 42	Double Track Electric Ry. and Highway
McKay, Portage du Fort..	200	20	9	Highway
Desjoachims Lock........	65	20	12 & 45	"
Mattawa Lock...........	110	20	13 & 47	"
" Canal..........	160	20	13	Single Track C.P.Ry., Kippawa Branch
North Bay Lock	110	20	14 & 50	Highway
" Canal.........	160	25	14	Double Track, C.P.Ry.
Pickerel River............	200	20	16	Single Track, C.P.Ry.
" "	200	20	16	Single Track, C.N.Ry.
RIVIERE DES PRAIRIES (Alternative Route)				
Bout de L'Ile, Canal......	200	25	4A	Double Track, C. N. Ry.
Recollet Lock............	65	20	4A & 30	Highway
Parc Laval, Canal........	200	25	4A	Double Track, C. P. Ry.
Cartierville, Canal........	200	20	4A	Highway
CALUMET CHANNEL				
Bryson Lock.............	65	20	9A & 52	Highway
Coulonge, Canal..........	200	20	9A	"
CULBUTE CHANNEL				
Chapeau, Ottawa River...	200	20	9A	Highway
WESTMEATH CANAL (Alternative Route)				
Westmeath Lock.........	65	20	10 & 53	Highway

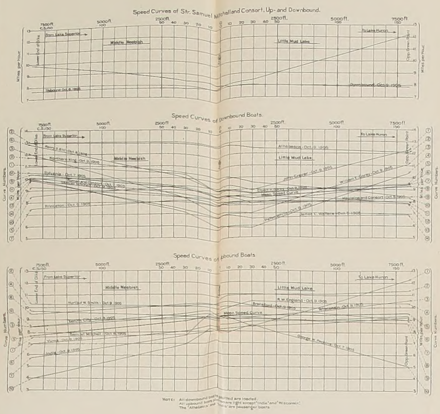


Single Span Bridge



Bridge over lock walls

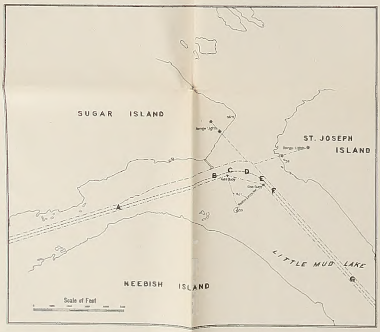
Paul E. Moffet, Del.

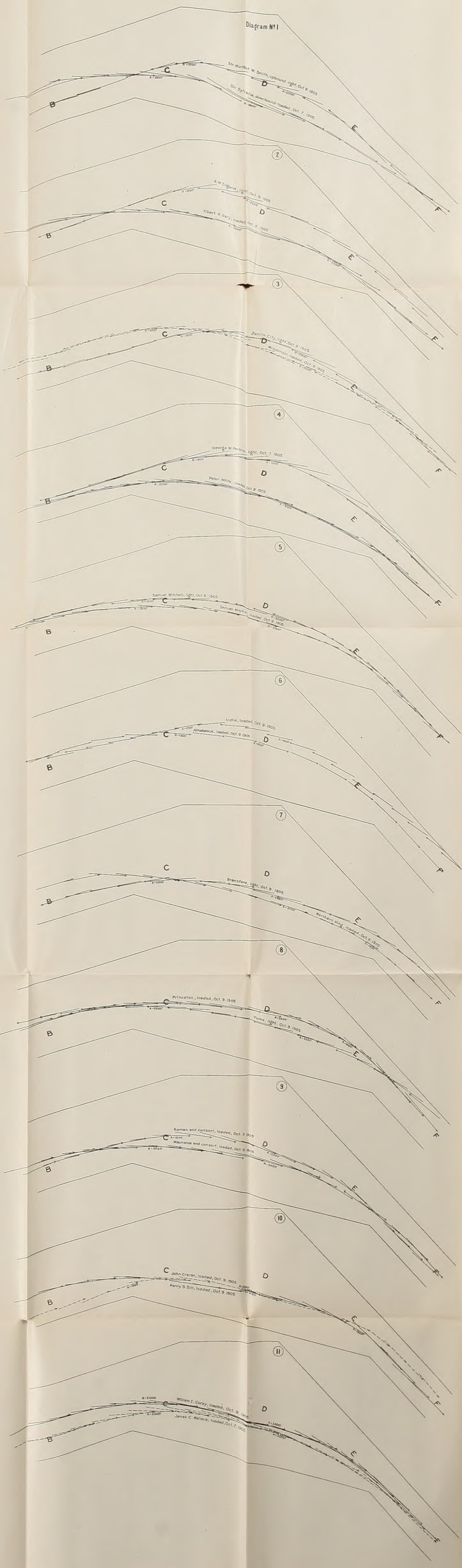


Summary of Dimensions and Speed of Boats

Name	Tonnage: Registered	Tonnage: Freight	Dimensions: Length	Dimensions: Beam	Dimensions: Draft	Bound	Wind	Speed in Miles per Hour from: A to B 5840'	B to C 1000'	C to D 820'	D to E 820'	E to F 1000'	F to G 6430'	Oct. 1905	Diagram No.	Remarks
Athabasca	1545	1568	270'	38' 2"	15'10"	Down	N.E. Light	12.88	12.84	12.88	12.75	12.44	12.27	9	6	Met a barge at lower black gas buoy.
Bransford	3386	-----	435'	50' 0"	14' 0"	Up	N.E. Light	9.73	10.13	10.29	10.35	10.03	9.48	9	7	Another barge about 2000 ft. ahead.
W.E.Corey	5045	11536	569'	56' 0"	19' 2"	Down	N.E. 8 Mi.	10.26	8.28	7.44	7.08	7.03	9.25	9	11	Nothing in the way.
John Crerar	955	2170	257'	41' 0"	14' 0"	Down	N.E. Light	10.70	10.28	9.40	9.40	8.92	10.78	9	10	Nothing in the way.
R.W.England	2935	-----	382'	51' 2"	13'10"	Up	N.E. Light	9.43	9.18	9.40	9.83	10.43	10.37	9	2	Another barge about 2000 ft. ahead.
E.H.Gary	4988	11984	569'	56' 0"	19' 8"	Down	N.E. Light	8.85	9.33	9.35	8.98	8.67	9.12	9	2	Nothing in the way.
India	932	743	222'	33' 6"	13' 3"	Up	N.E. Brisk	6.60	8.69	9.37	9.05	8.39	8.82	9	6	Nothing in the way.
Maunaloa	4004	7532	450'	51' 2"	19' 3"	Down	N.E. Light	8.80	8.30	8.22	7.73	7.64	7.51	9	9	With one consort.
Sam'l Mitchell	1870	-----	308'	40' 8"	14' 6"	Up	Calm	7.64	7.72	7.92	8.17	8.39	10.46	6	5	With one consort.
Sam'l Mitchell	1870	3556	308'	40' 8"	18' 6"	Down	N.E. Brisk	9.15	8.36	8.47	7.96	7.99	7.91	9	5	With one consort.
Northern King	1885	2689	315	41' 0"	15'10"	Down	N.E. Light	11.09	10.38	10.36	10.09	9.57	8.95	9	7	Nothing in the way.
G.W.Perkins	4922	-----	569'	56' 0"	15' 3"	Up	S.E. Fresh	5.29	6.95	8.18	7.84	8.50	6.66	7	4	Checked; another barge close ahead.
Princeton	3820	8512	474'	51' 0"	19' 4"	Down	N.E. Light	7.72	8.08	8.05	7.82	7.83	8.68	9	8	Nothing in the way.
Roman	1875	3472	313'	41' 0"	17' 4"	Down	S.E. Fresh	9.37	8.61	8.49	8.42	7.84	7.85	7	9	With one consort. Nothing in the way.
Sylvania	4826	10304	524'	54' 0"	19' 2"	Down	S.E. Fresh	9.88	9.21	8.87	8.47	8.49	8.17	7	1	Nothing in the way.
H.W.Smith	3415	-----	434'	50' 0"	14' 0"	Up	N.E. Light	10.10	9.98	10.17	10.66	10.93	11.13	9	1	Nothing in the way.
H.S.Sill	3282	7200	436'	51' 4"	18'10"	Down	N.E. Light	10.48	9.98	9.36	8.94	8.61	9.03	9	10	Nothing in the way.
J.C.Wallace	5403	11200	552'	56' 0"	19' 0"	Down	S.E. Fresh	8.65	7.33	7.08	6.90	6.56	6.77	7	11	Nothing in the way.
Peter White	4931	9856	525'	54' 0"	19' 3"	Down	N.E. Light	8.62	7.09	6.40	5.89	5.79	8.27	9	4	Checked down in angle
Wisconsin	3707	5500	464'	51' 0"	16' 6"	Up	N.E. Light	8.75	9.16	9.06	9.16	9.11	9.89	9	3	Met a barge at upper black gas buoy.
Yuma	1828	-----	340'	43' 0"	10' 0"	Up	N.E. Light	7.44	7.99	8.39	8.47	8.77	9.06	9	8	Nothing in the way.
Zenith City	3429	-----	405'	49' 3"	14' 0"	Up	N.E. Light	8.87	9.39	9.66	8.88	9.06	8.87	9	3	Nothing in the way.
Mean speed of up-bound boats								8.21	8.79	9.16	9.18	9.29	9.41			
Mean speed of down-bound boats								9.73	9.08	8.79	8.49	8.26	8.81			

NOTE: Depth of water in channel 20 ½ ft.





Public Works Canada

Georgian Bay Ship Canal

DIAGRAMS

showing speed of boats rounding curve, head of Little Mud Lake, St. Marys River, Mich.

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Scale of Feet

NOTE

Located by Transit intersections taken at 15 seconds intervals from stations □ 36 and △ 55 on the bow and from □ 53 and □ 59 on the stern of passing boats.

To accompany report upon survey, with plans and estimates of cost for a navigable waterway 22 feet deep from Georgian Bay to Montreal.

A. St. Laurent, Engineer in Charge
C. R. Coutlee,
S. J. Chapleau,
District Engineers

Public Works Canada

Georgian Bay Ship Canal

Diagrams showing movement of Boats through Poe Lock and Approaches St. Marys Falls Canal Mich.

for Month of September 1905

Reproduced by permission from Report of the Board of Consulting Engineers for the Panama Canal

To accompany report upon survey, with plans and estimates of cost for a navigable waterway 22 feet deep from Georgian Bay to Montreal.

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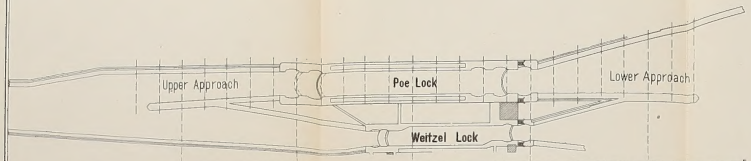
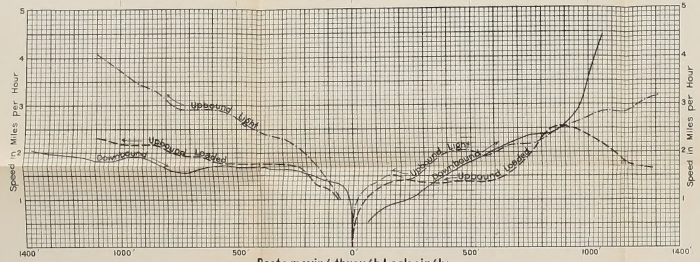
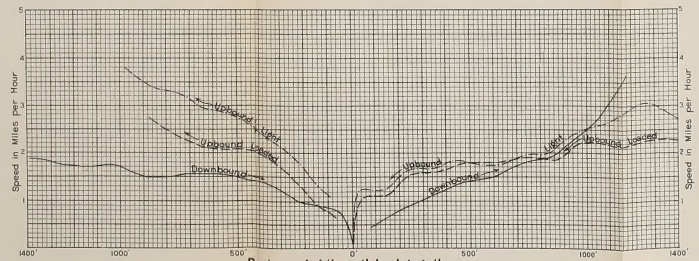
S.J. Chapleau, A.M.Can.Soc. & M.Am.Soc. C.E. District Engineers

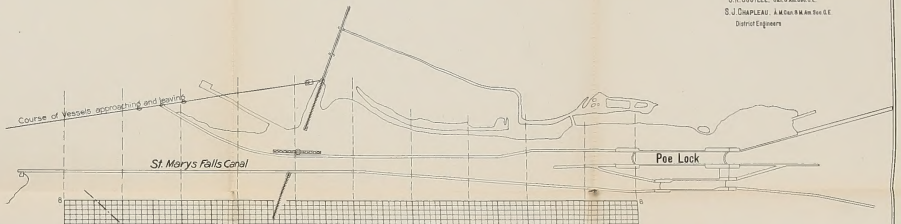


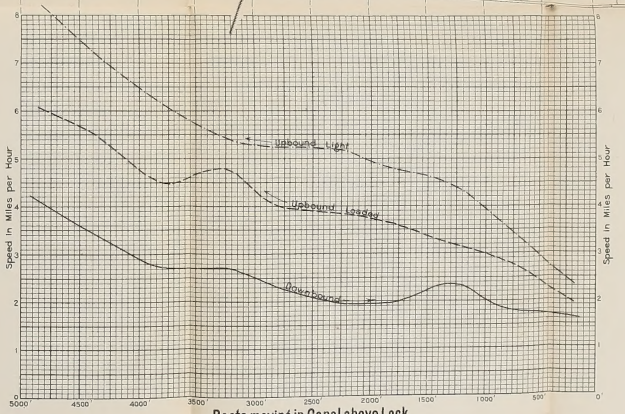


Boats moving through Lock singly



Boats moving through Lock together

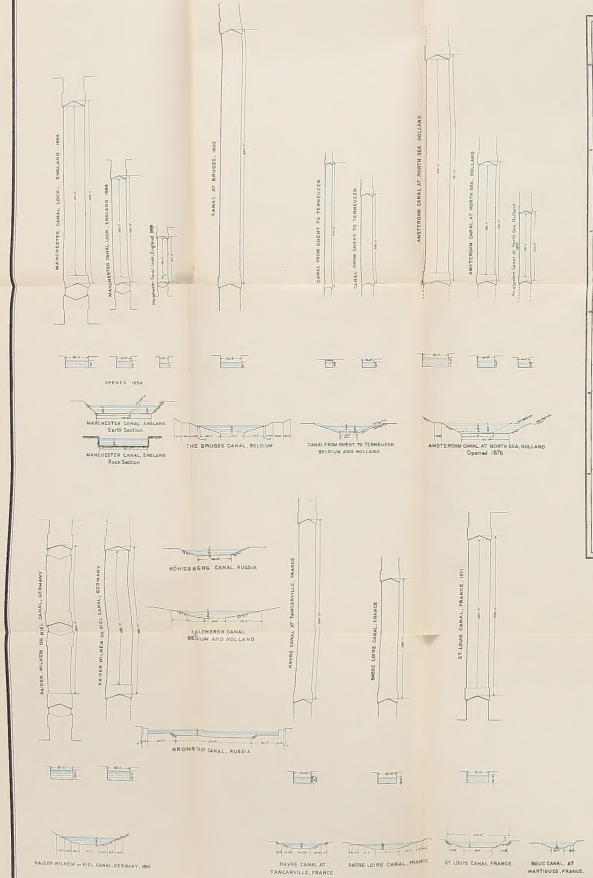




Boats moving in Canal above Lock

J.E.P. Matte, Del.

LOCKS AND SECTIONS OF VARIOUS WATERWAYS



SCALE OF FEET

100 50 0 100 200 300 400 500

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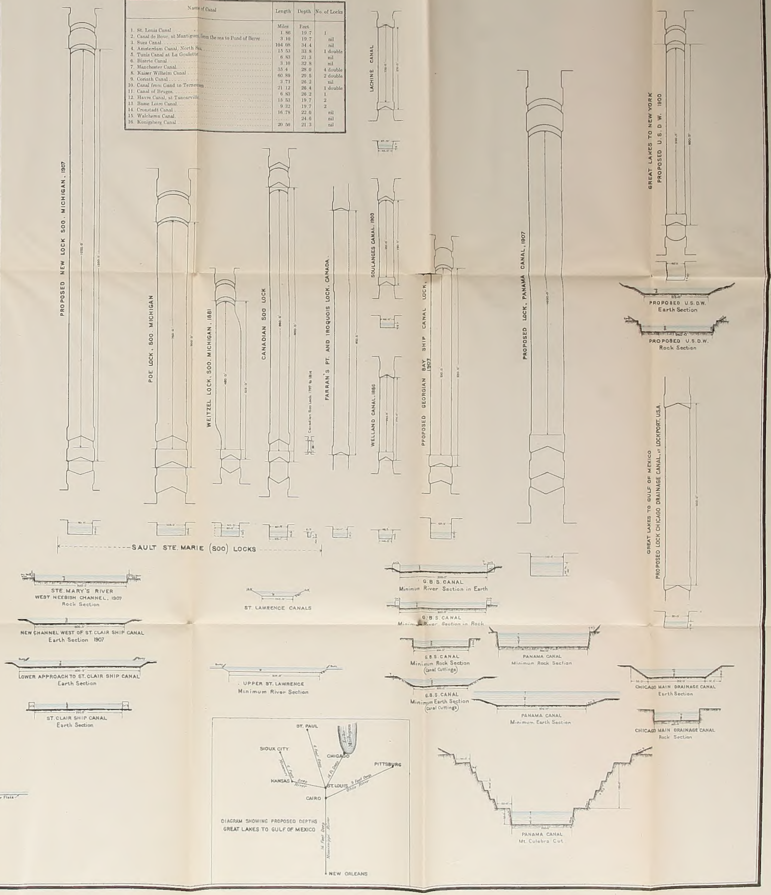
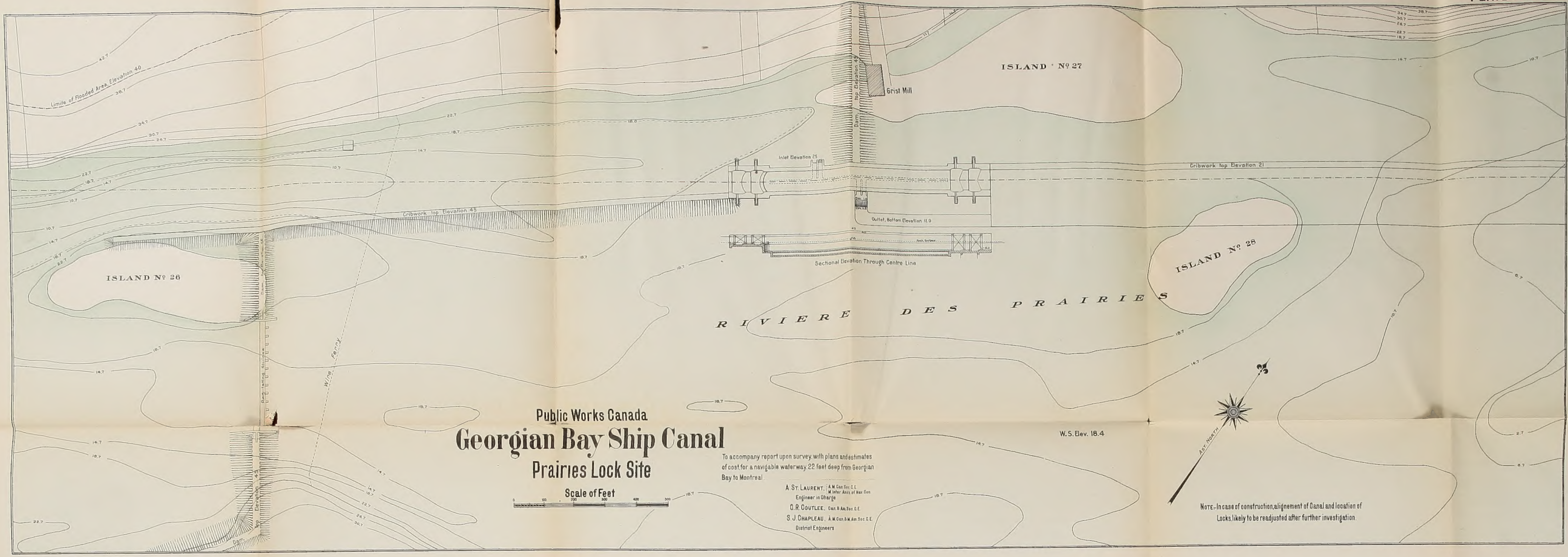
A. St. Laurent, M. Can. Soc. C.E., M. Inter. Ass'n of Nav. Con.
Engineer in Charge

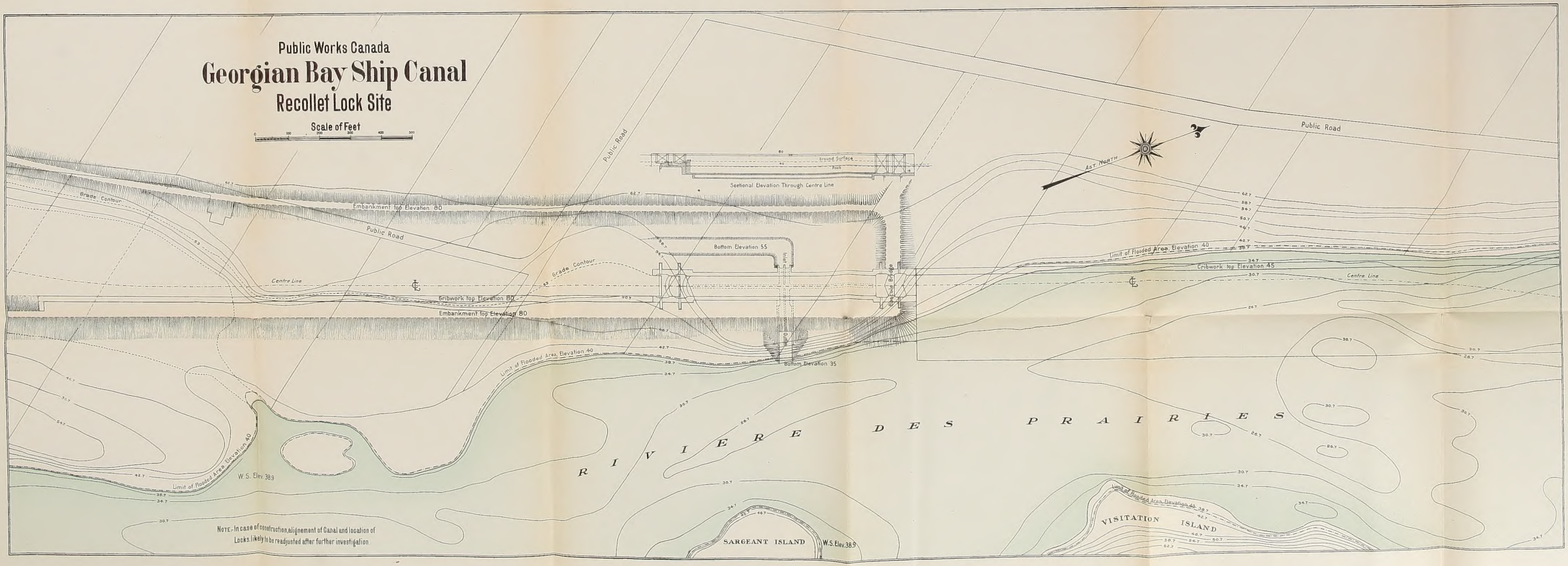
O. R. Coutlee, Can. & Am. Soc. C.E.
S. J. Chapleau, A. M. Can. & M. Am. Soc. C.E.
District Engineers

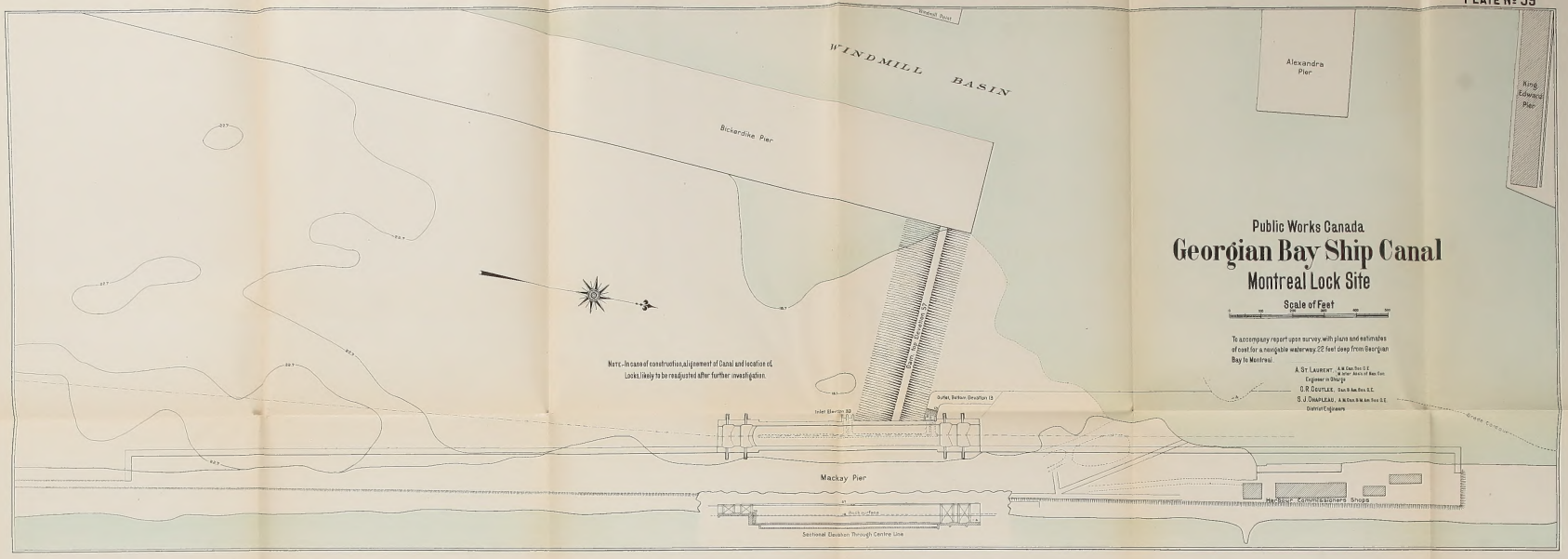
DIMENSIONS OF THE CANALS OF EUROPE.

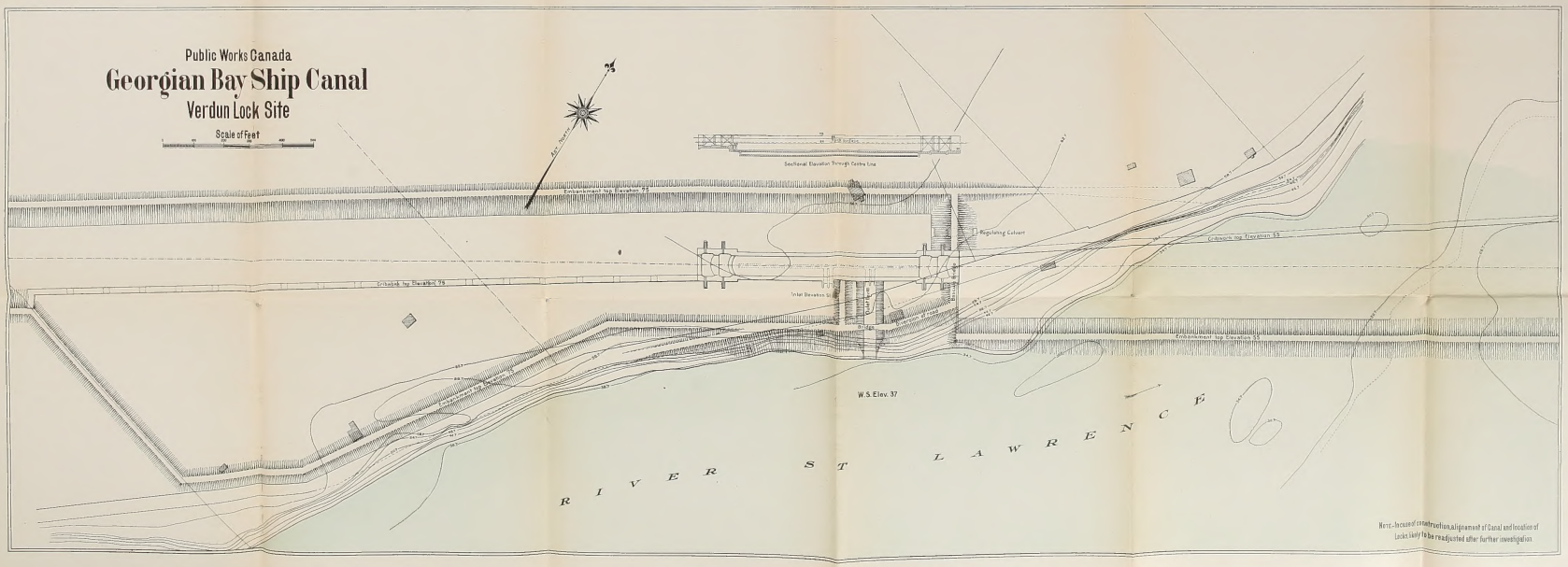
Name of Canal	Length	Depth	No. of Locks
	Miles	Feet	
1. St. Louis Canal	1.86	19.7	1
2. Canal de Bouc, at Mantigues, from the sea to Pond of Berre	3.10	19.7	nil
3. Suez Canal	104.08	34.4	nil
4. Amsterdam Canal, North Sea	15.53	33.8	1 double
5. Tunis Canal at La Goulette	6.83	21.3	nil
6. Bizerte Canal	3.10	32.8	nil
7. Manchester Canal	35.4	28.0	4 double
8. Kaiser Wilhelm Canal	60.89	29.5	2 double
9. Corinth Canal	3.73	26.2	nil
10. Canal from Gand to Terneuzen	21.12	26.4	1 double
11. Canal of Bruges	6.83	26.2	1
12. Havre Canal, at Tancarville	15.53	19.7	2
13. Basse Loire Canal	9.32	19.7	2
14. Cronstadt Canal	16.78	22.0	nil
15. Walcheren Canal	......	24.6	nil
16. Konigsberg Canal	20.50	21.3	nil




Public Works Canada
Georgian Bay Ship Canal
Prairies Lock Site
Scale of Feet
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway 22 feet deep from Georgian Bay to Montreal
A. St. Laurent, A.M. Can. Soc. C.E., M. Inter. Ass'n of Nav. Con.
Engineer in Charge
C.R. Coutlee, Can. & Am. Soc. C.E.
S. J. Chapleau, A.M. Can. & M. Am. Soc. C.E.
District Engineers
ISLAND No 27
Grist Mill
ISLAND No 26
ISLAND No 28
RIVIERE DES PRAIRIES
Inlet Elevation 25
Outlet, Bottom Elevation 11.0
Sectional Elevation Through Centre Line
Cribwork top Elevation 21
Cribwork top Elevation 45
Limit of Flooded Area, Elevation 40
W. S. Elev. 18.4
Ast. North
Note - In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.


Public Works Canada
Georgian Bay Ship Canal
Recollet Lock Site
Scale of Feet
Public Road
Ast. North
Sectional Elevation Through Centre Line
Embankment top Elevation 80
Grade Contour
Bottom Elevation 55
Centre Line
Cribwork top Elevation 80
Embankment top Elevation 80
Limit of Flooded Area, Elevation 40
Cribwork top Elevation 45
Bottom Elevation 35
RIVIERE DES PRAIRIES
W. S. Elev. 38.9
SARGEANT ISLAND
VISITATION ISLAND
Note - In case of construction, alignement of Canal and location of Locks likely to be readjusted after further investigation


WINDMILL BASIN
Windmill Point
Bickerdike Pier
Alexandra Pier
King Edward Pier
Public Works Canada
Georgian Bay Ship Canal
Montreal Lock Site
Scale of Feet
To accompany report upon survey with plans and estimates of cost for a navigable waterway 22 feet deep from Georgian Bay to Montreal.
A. St. Laurent, A.M. Can. Soc. C.E. M. Inst. Mech. E. Asst. Gen. Engineer in Charge
O.R. Coutlee, Can. & Am. Soc. C.E.
S.J. Chapleau, A.M. Can. & Am. Soc. C.E.
Consult. Engineers
Note.–In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.
Inlet Elevation 82
Outlet, Bottom Elevation 13
Mackay Pier
Harbour Commissioners Sheds
Sectional Elevation Through Centre Line

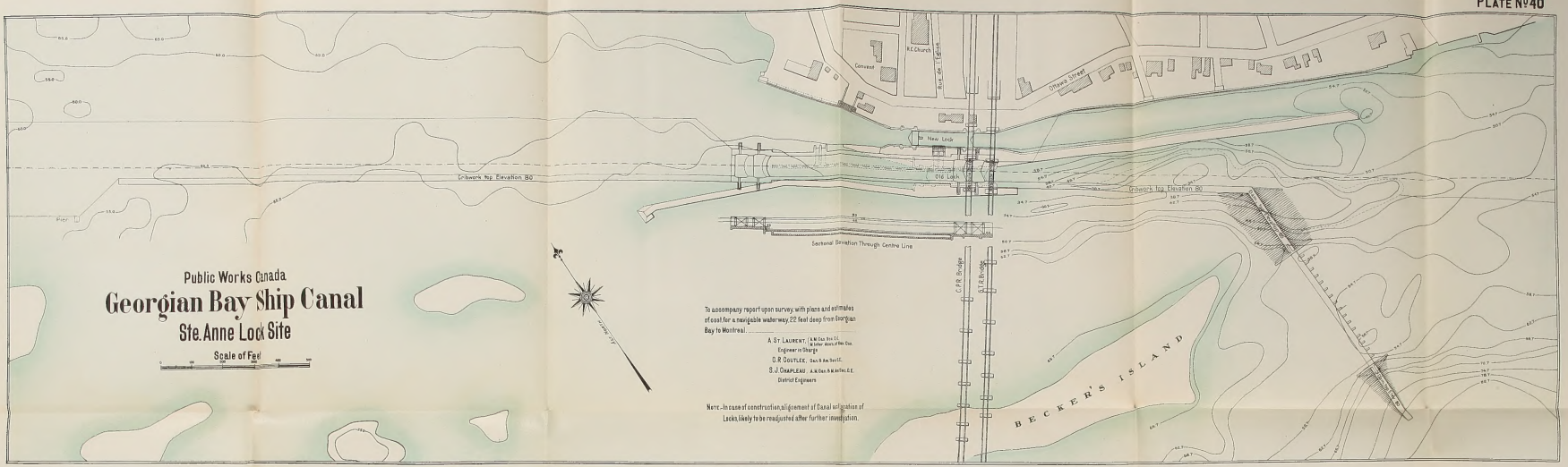

Public Works Canada
Georgian Bay Ship Canal
Verdun Lock Site
Scale of Feet
Sectional Elevation Through Centre Line
Regulating Culvert
Embankment Top Elevation 53
Embankment Top Elevation 55
W.S. Elev. 37
RIVER ST LAWRENCE
Note.–In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.

Public Works Canada

Georgian Bay Ship Canal

Ste. Anne Lock Site

Scale of Feet



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O.R. GOUTLEE, Can. & Am. Soc. C.E.

S.J. CHAPLEAU, A.M. Can. Soc. & Am. Soc. C.E. District Engineers

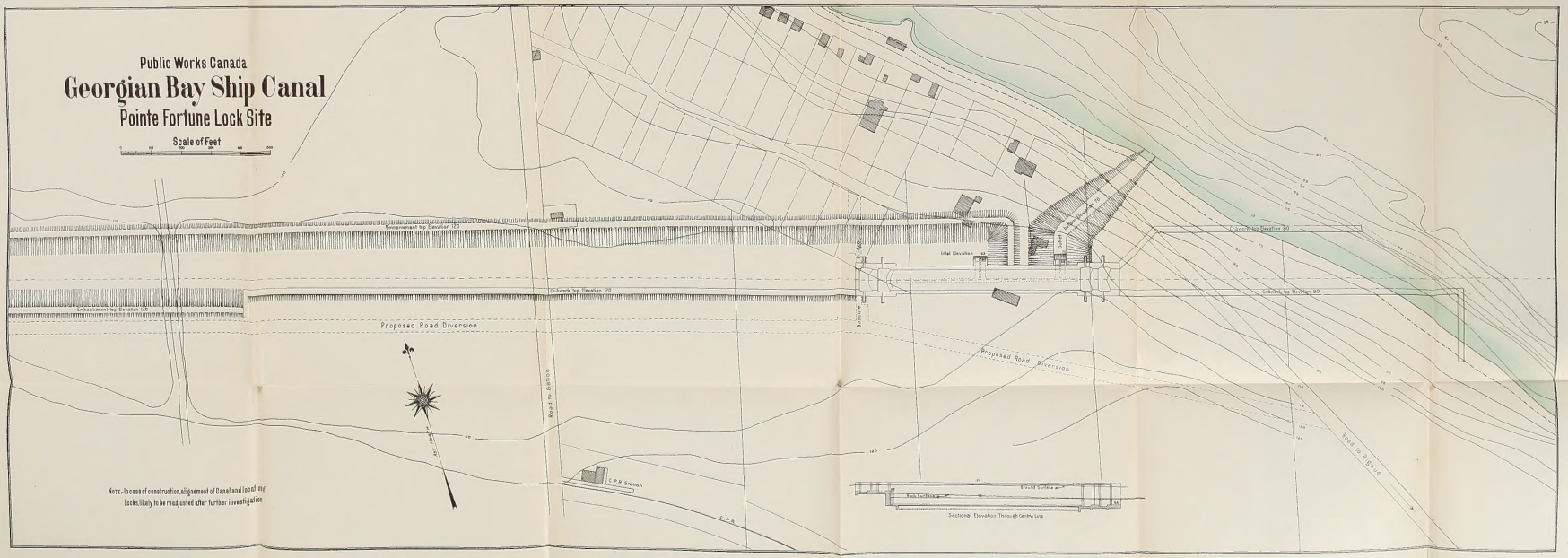
NOTE.—In case of construction, alignement of Canal & location of Locks, likely to be readjusted after further investigation.

Public Works Canada

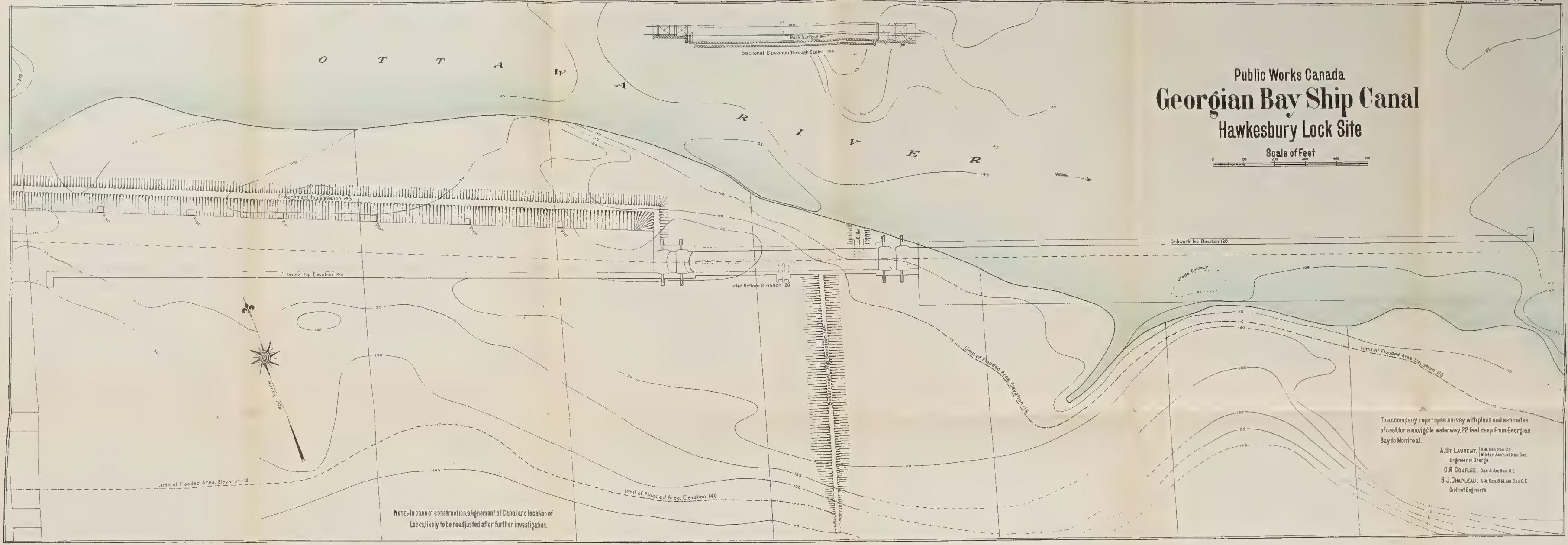
Georgian Bay Ship Canal

Pointe Fortune Lock Site

Scale of Feet



NOTE.—In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation



Public Works Canada
Georgian Bay Ship Canal
Hawkesbury Lock Site
Scale of Feet
OTTAWA RIVER
Sectional Elevation Through Centre line
Rock Surface
Embankment top Elevation 145
Cribwork top Elevation 120
Inlet Bottom Elevation 20
Limit of Flooded Area Elevation 115
Limit of Flooded Area Elevation 140
Grade Contour
Note.-In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.
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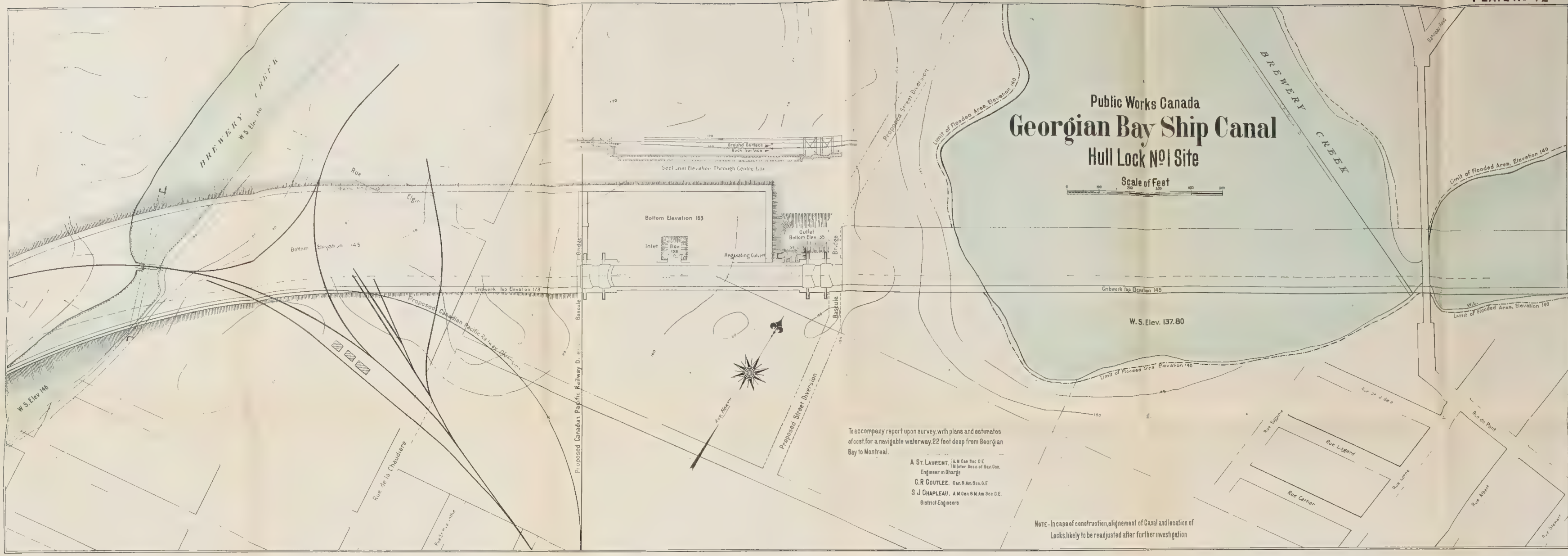
C.R Coutlee, Can. & Am. Soc. C.E
S J. Chapleau, A.M. Can. & M. Am. Soc. C.E District Engineers

PLATE Nº 42



Public Works Canada
Georgian Bay Ship Canal
Hull Lock Nº1 Site
Scale of Feet
Brewery Creek
W. S. Elev. 140
W. S. Elev. 146
W. S. Elev. 137.80
Limit of Flooded Area, Elevation 140
Section Elevation Through Centre Line
Bottom Elevation 163
Bottom Elevation 145
Inlet
Outlet
Regulating Culvert
Cribwork top Elevation 173
Cribwork top Elevation 145
Bascule
Bridge
Proposed Canadian Pacific Railway Diversion
Proposed Street Diversion
Rue de la Chaudiere
Rue Eugenie
Rue Leguard
Rue Cartier
Rue Laurier
Rue du Pont
Rue Albert
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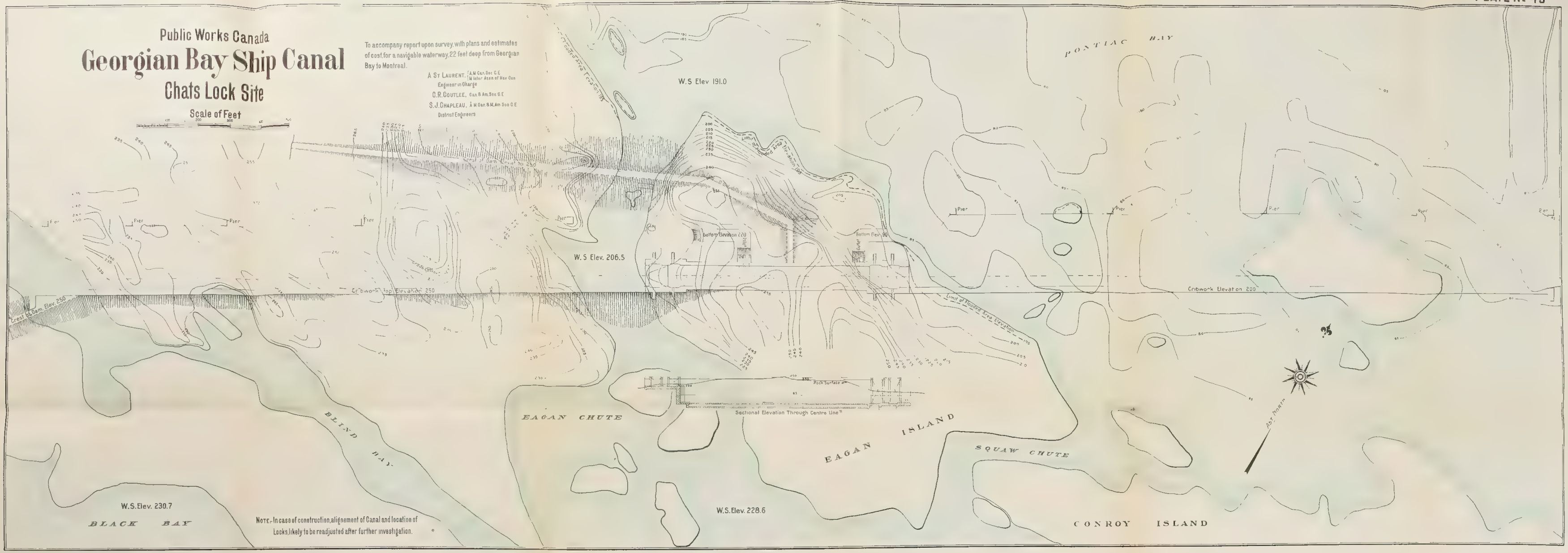
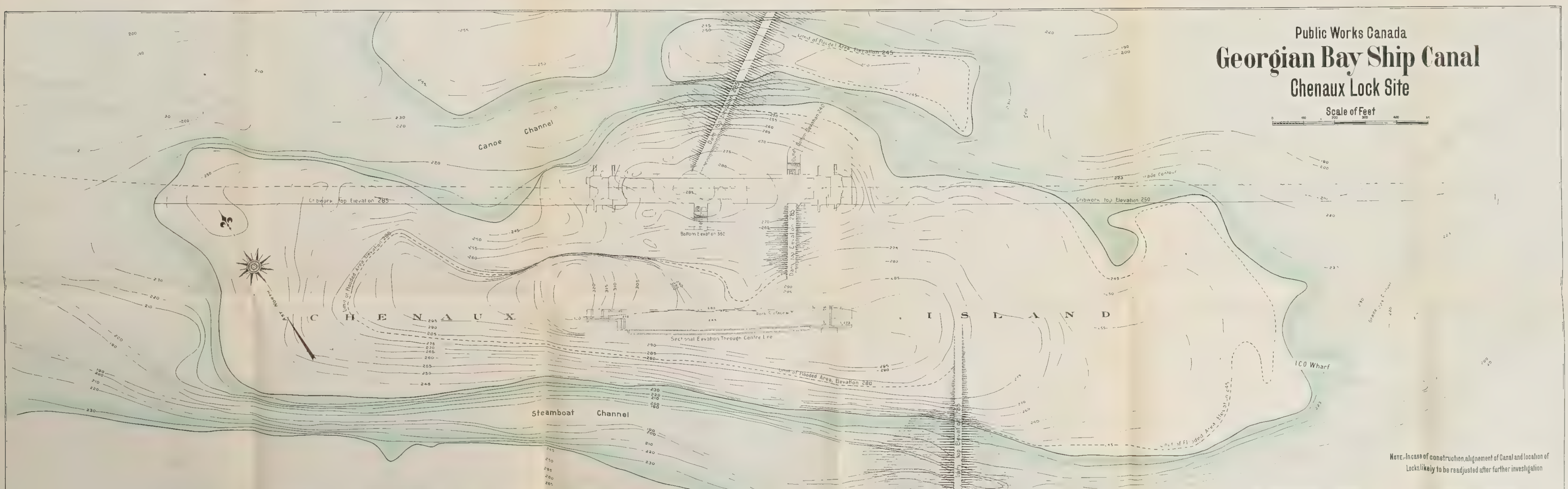
A. St. Laurent, Engineer in Charge
C. R. Coutlee, District Engineers
S. J. Chapleau
Note - In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation

Public Works Canada
Georgian Bay Ship Canal
Hull Lock Nº2 Site
Scale of Feet
Ast. North
Proposed Hull Electric Railway Diversion
Proposed Canadian Pacific Railway Diversion
Section Elevation Through Centre Line
Rock Surface
Cribwork top Elevation 200
Centre Line of Canal
Bottom Elevation 178
Inlet, Bottom Elevation 168
Outlet, Bottom Elevation 153
Cribwork top Elevation 200
Canadian Pacific Railway
C. P. R. Station
Propd Canadian Pacific Railway Diversion
Brewery Street
Matthew's Packing house
Canadian Pacific Railway to Montreal
Canadian Pacific Railway to Ottawa
Bottom Elevation 146
Centre Line of Canal
Brewery Creek
W. S. Elev. 146.0
Aylmer Road
From Ottawa
Hull Electric Railway
Water Works
Note - In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation


Public Works Canada
Georgian Bay Ship Canal
Chats Lock Site
Scale of Feet
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway, 22 feet deep from Georgian Bay to Montreal.
A St Laurent, A.M. Can. Soc. C.E. M. Inter. Ass'n of Nav. Con. Engineer in Charge
C.R. Coutlee, Can. & Am. Soc. C.E.
S.J. Chapleau, A.M. Can. & M. Am. Soc. C.E. District Engineers
W.S. Elev. 191.0
Pontiac Bay
W.S. Elev. 206.5
Cribwork top Elevation 250
Cribwork Elevation 200
Sectional Elevation Through Centre Line
Eagan Chute
Eagan Island
Squaw Chute
Blind Bay
W.S. Elev. 230.7
Black Bay
W.S. Elev. 228.6
Conroy Island
Note:- In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.

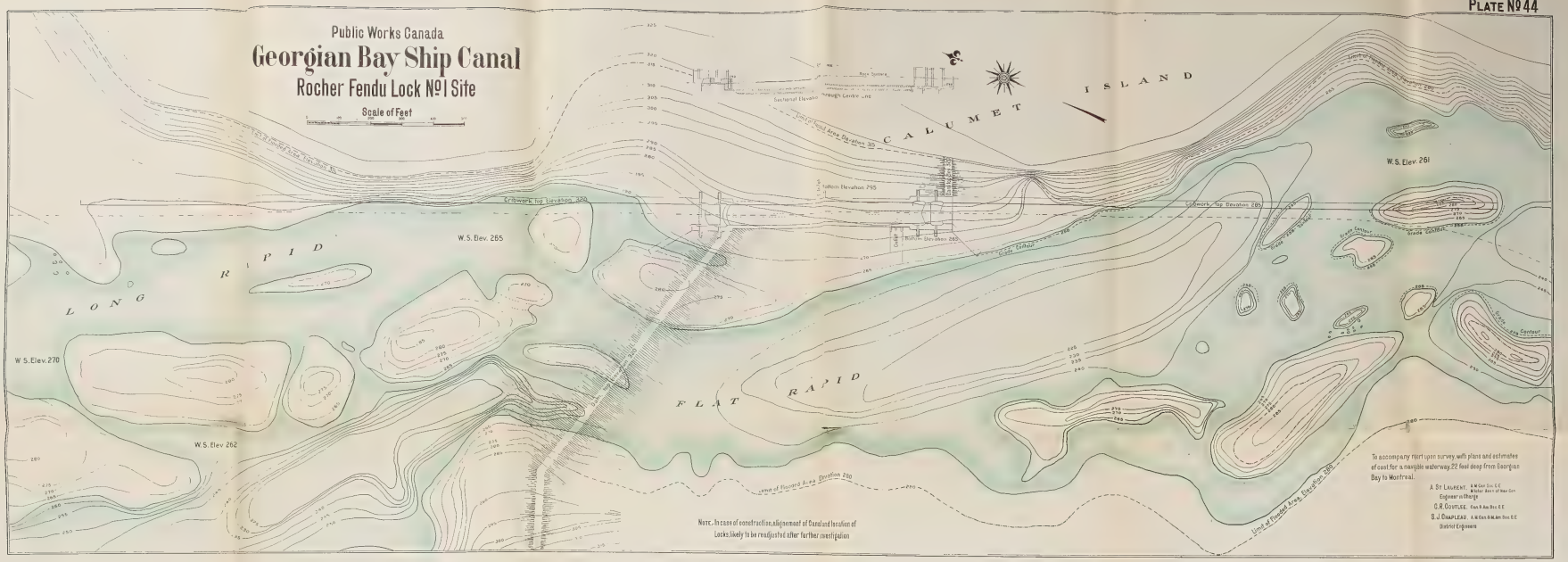

Public Works Canada
Georgian Bay Ship Canal
Chenaux Lock Site
Scale of Feet
Canoe Channel
Limit of Flooded Area, Elevation 245
Cribwork top Elevation 285
Cribwork top Elevation 250
Sectional Elevation Through Centre Line
Limit of Flooded Area, Elevation 280
Chenaux Island
Steamboat Channel
I.C.O. Wharf
Note:- In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.

Public Works Canada

Georgian Bay Ship Canal

Rocher Fendu Lock Nº 1 Site

Scale of Feet



Public Works Canada

Georgian Bay Ship Canal

Rocher Fendu Lock Nº 2 Site

Scale of Feet

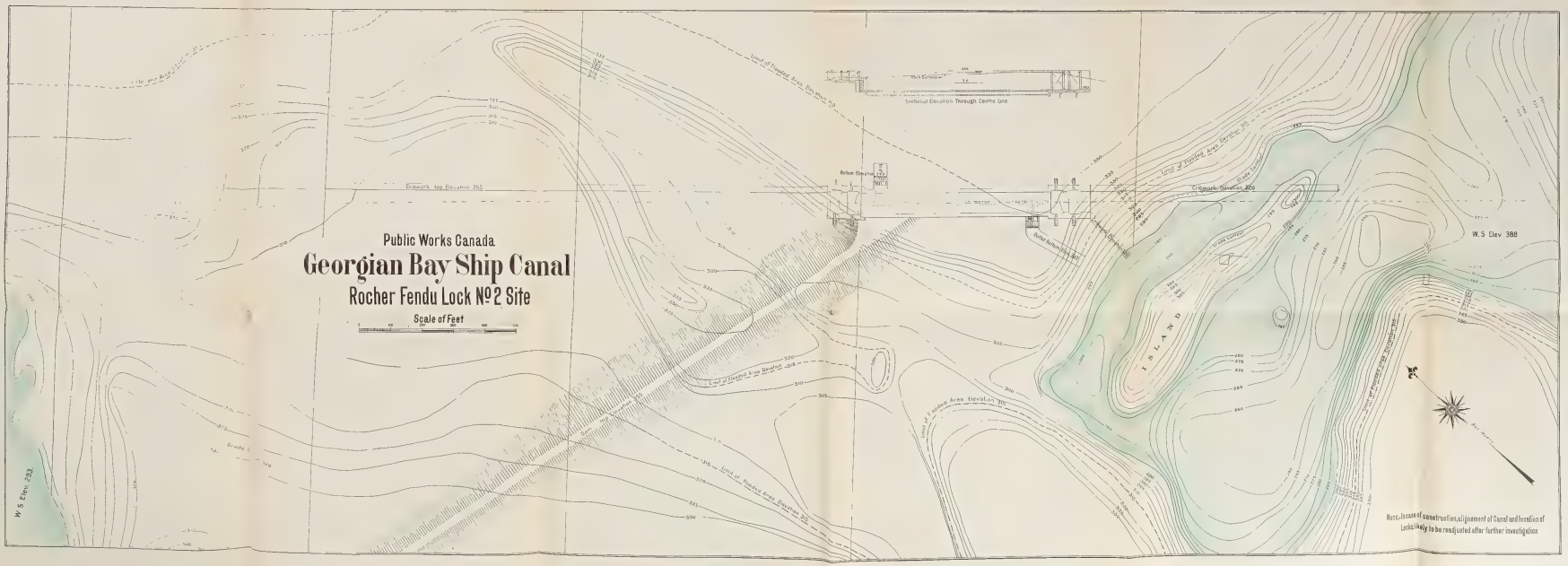
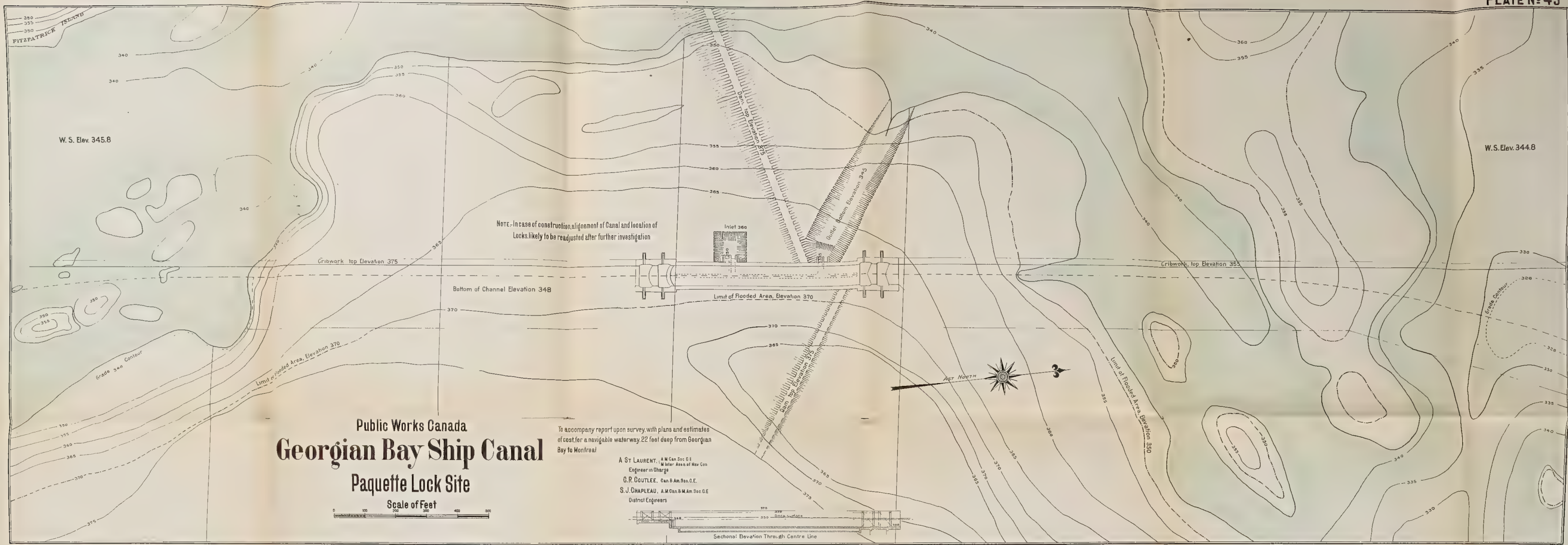
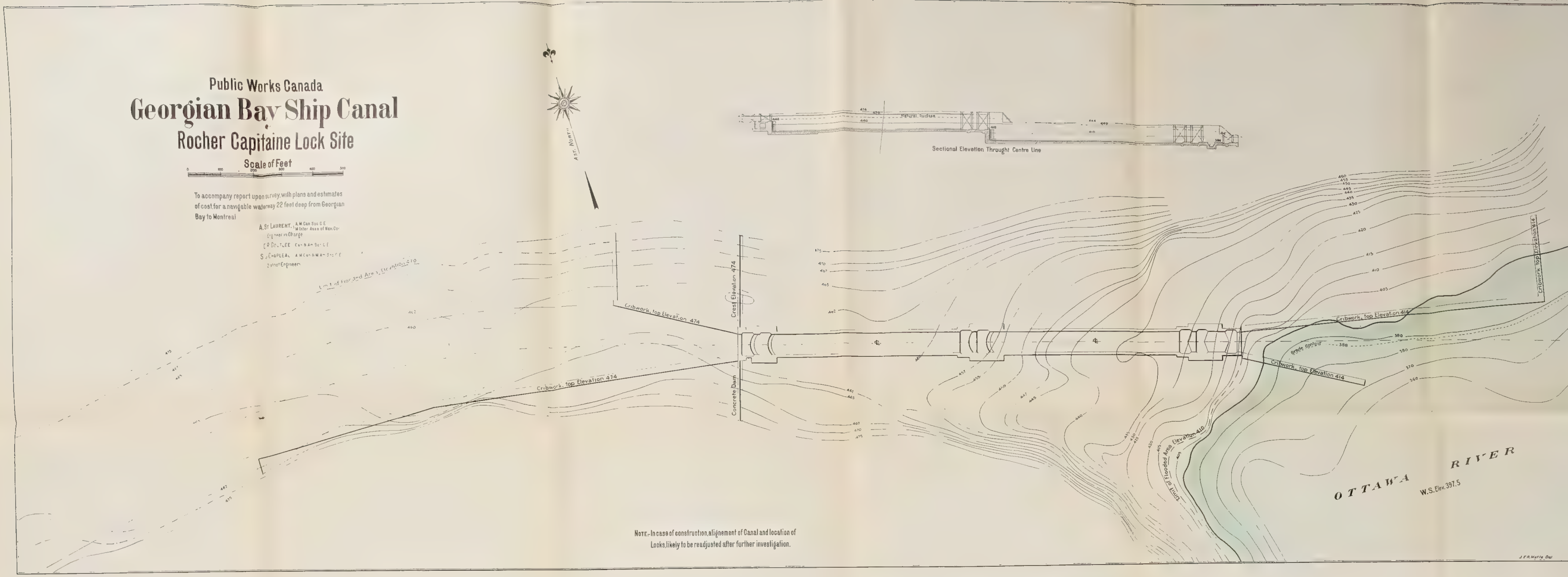


PLATE No 45


Public Works Canada
Georgian Bay Ship Canal
Paquette Lock Site
Scale of Feet
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway 22 feet deep from Georgian Bay to Montreal
A. St Laurent, Engineer in Charge
C.R. Coutlee, District Engineers
S.J. Chapleau
Note.-In case of construction, alignement of Canal and location of Locks likely to be readjusted after further investigation
W. S. Elev. 345.8
W.S. Elev. 344.8
Fitzpatrick Island
Cribwork top Elevation 375
Cribwork, top Elevation 355
Bottom of Channel Elevation 348
Limit of Flooded Area, Elevation 370
Limit of Flooded Area, Elevation 350
Grade 340 Contour
Grade Contour
Inlet 360
Sectional Elevation Through Centre Line
Ast North


Public Works Canada
Georgian Bay Ship Canal
Desjoachims Lock Site
Scale of Feet
W. S. Elev. 377.5
W. S. Ele. 365.0
Laurent Island
Ottawa River
Timber Slide
Cribwork, Elevation 415
Limit of Flooded Area, Elevation 410
Grade Contour 388
Grade Contour 368
Sectional Elevation Through Centre Line
Ground Surface
Outlet
Road
Ast North
Note.-In case of construction, alignement of Canal and location of Locks likely to be readjusted after further investigation.


Public Works Canada
Georgian Bay Ship Canal
Rocher Capitaine Lock Site
Scale of Feet
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway 22 feet deep from Georgian Bay to Montreal
A. St Laurent, Engineer in Charge
S. J. Chapleau, District Engineers
Ast. North
Sectional Elevation Throught Centre Line
Natural Surface
Crest Elevation 474
Concrete Dam
Cribwork, top Elevation 474
Cribwork, top Elevation 414
Limit of Flooded Area, Elevation 410
OTTAWA RIVER
W.S. Elev. 397.5
Note.- In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.

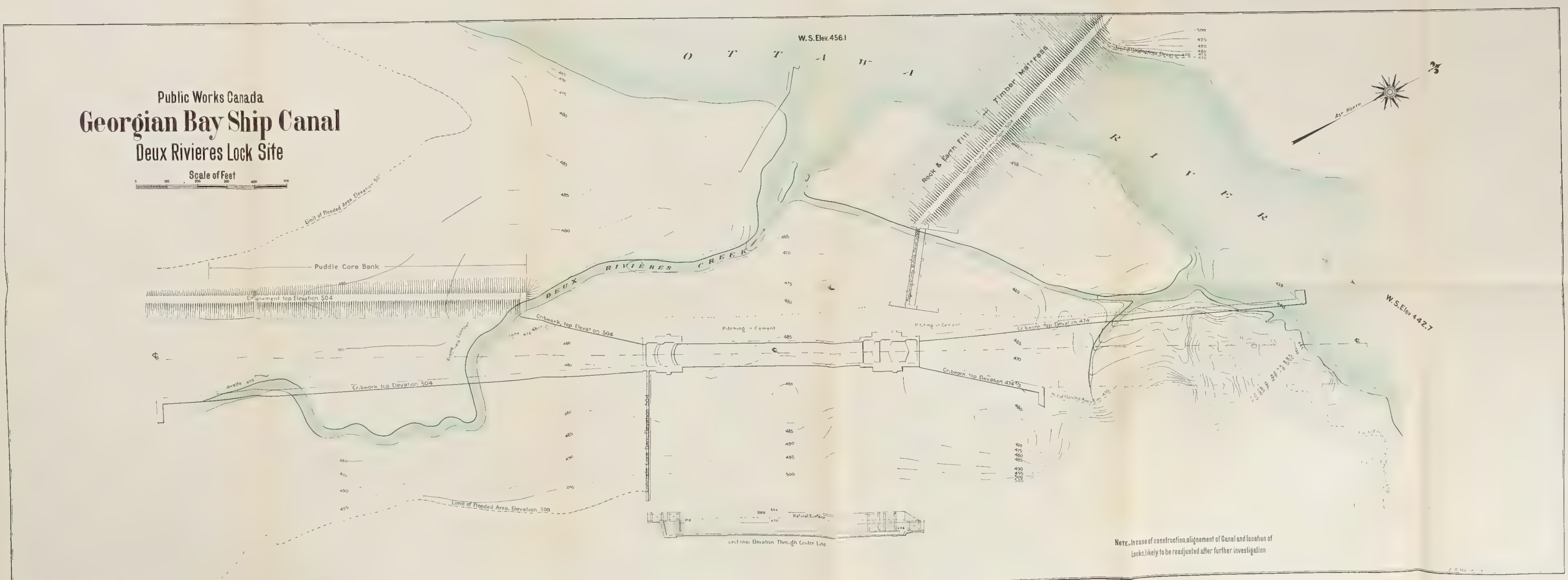
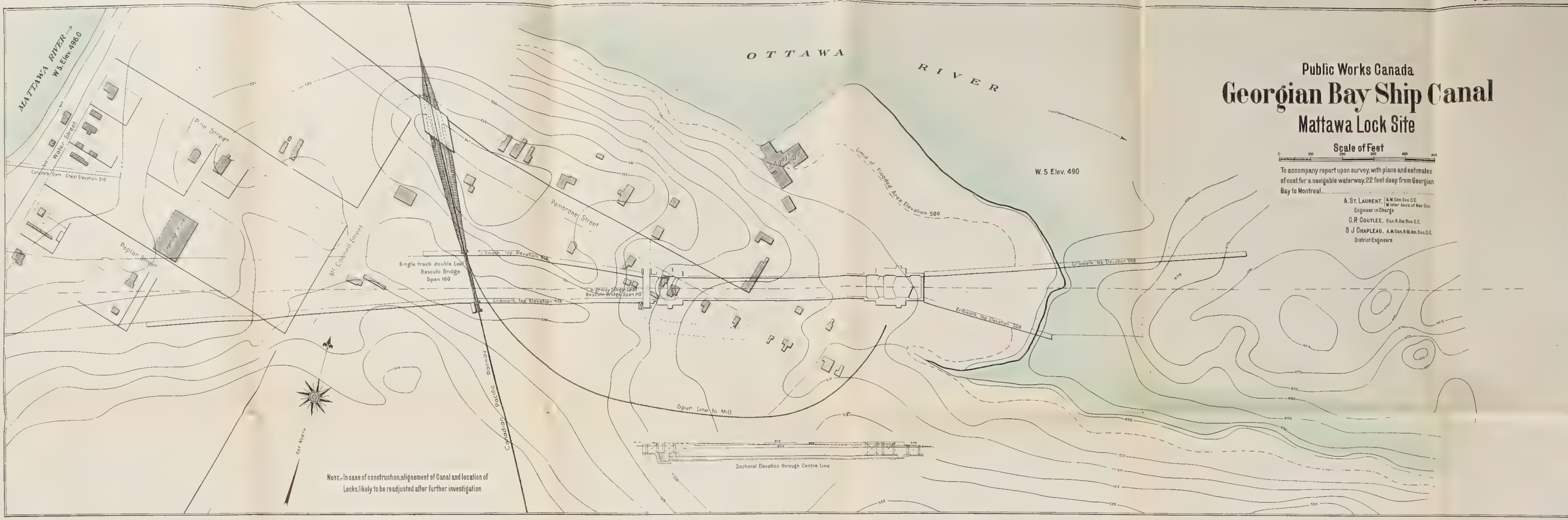

Public Works Canada
Georgian Bay Ship Canal
Deux Rivieres Lock Site
Scale of Feet
W. S. Elev. 456.1
OTTAWA RIVER
Ast. North
Rock & Earth Fill
Timber Mattress
Limit of Flooded Area, Elevation 501
Puddle Core Bank
DEUX RIVIÈRES CREEK
Embankment top Elevation 504
Cribwork, top Elevation 504
Cribwork, top Elevation 474
Pitching - Cement
W. S. Elev. 442.7
Limit of Flooded Area, Elevation 500
Natural Surface
Sectional Elevation Through Centre Line
Note.- In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.

PLATE No. 47


Public Works Canada
Georgian Bay Ship Canal
Mattawa Lock Site
Scale of Feet
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway, 22 feet deep from Georgian Bay to Montreal.
A. St. Laurent, A.M.Can.Soc.C.E. M. Inter. Ass'n. of Nav. Con. Engineer in Charge
C.R. Coutlee, Can. & Am. Soc. C.E.
S. J. Chapleau, A.M.Can. & M.Am.Soc.C.E.
District Engineers
OTTAWA RIVER
MATTAWA RIVER
W.S. Elev. 496.0
W.S. Elev. 490
Limit of Flooded Area Elevation 500
Pine Street
Pembroke Street
Poplar Street
McConnell Street
Water Street
Canadian Pacific Railway
Spur Line to Mill
Single track double Leaf Bascule Bridge Span 160
Cribwork, Top Elevation 516
Cribwork, Top Elevation 508
Sectional Elevation through Centre Line
Note.- In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation


Public Works Canada
Georgian Bay Ship Canal
Plain Chant Lock Site
Scale of Feet
MATTAWA RIVER
W.S. Elev. 516.7
W.S. Elev. 496.8
Limit of Flooded Area Elevation 510
Grade Contour
Cribwork, Top Elevation 544
Cribwork, Top Elevation 516
Sectional Elevation Through Centre Line
Note.- In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation

PLATE Nº 48

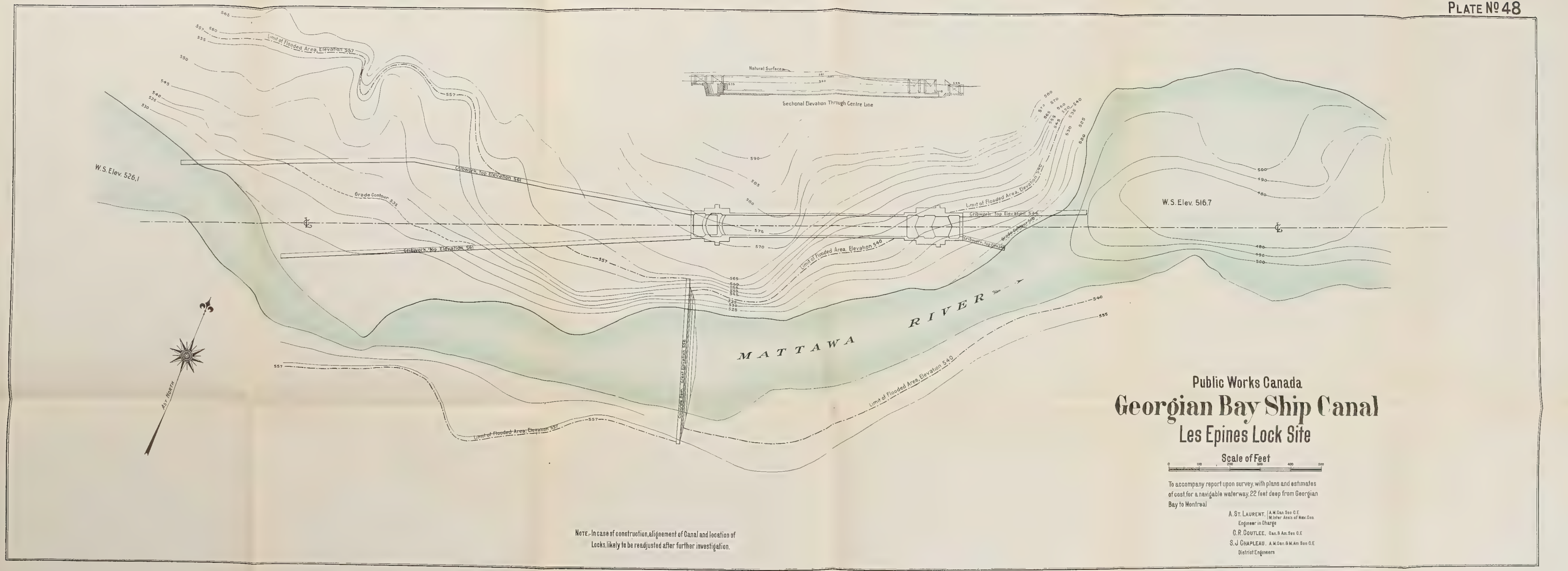
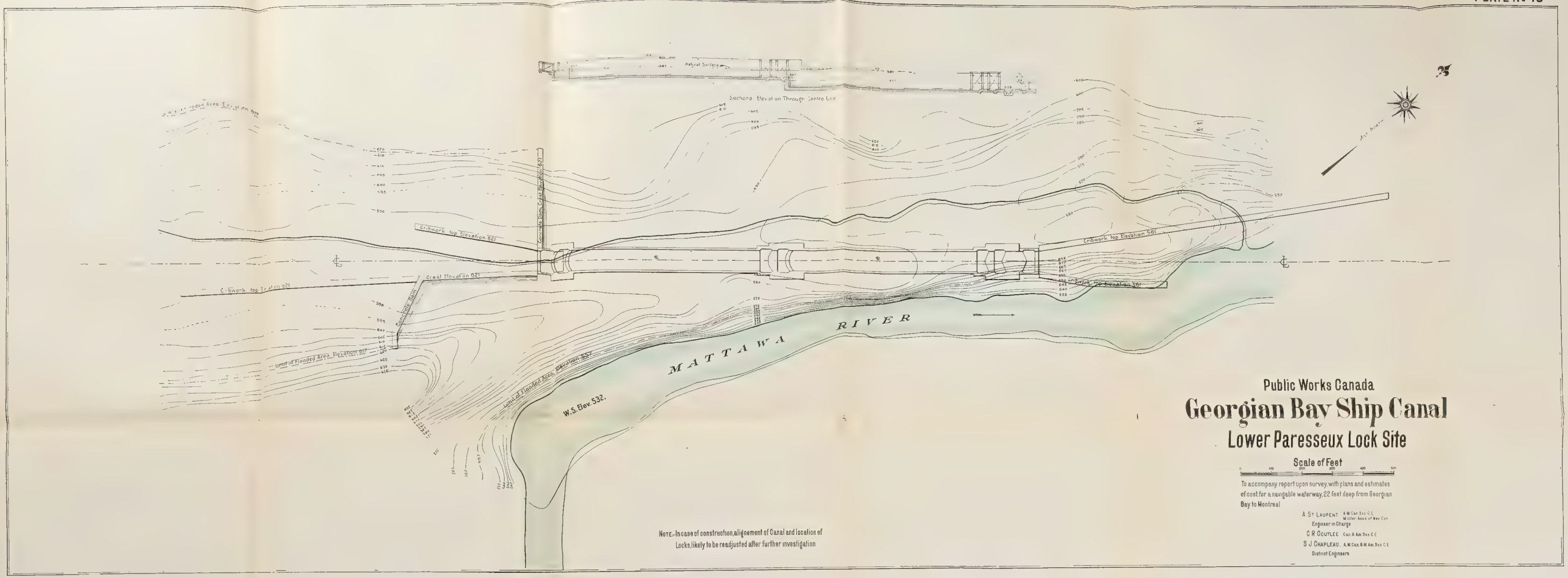
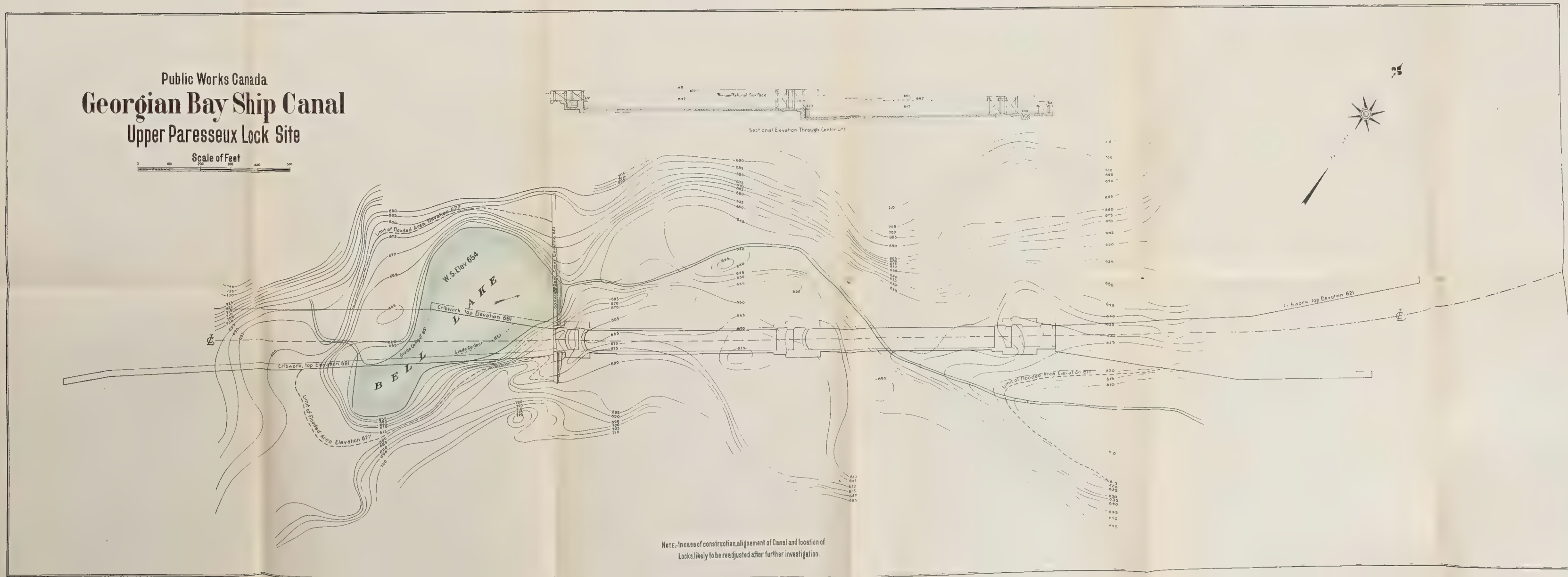

Public Works Canada
Georgian Bay Ship Canal
Les Epines Lock Site
Scale of Feet
0 100 200 300 400 500
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway, 22 feet deep from Georgian Bay to Montreal
A. St. Laurent, A.M.Can.Soc.C.E. M.Inter Ass'n of Nav.Con.
Engineer in Charge
C.R. Coutlee, Can. & Am. Soc. C.E.
S.J Chapleau, A.M.Can. & M.Am Soc. C.E.
District Engineers
MATTAWA RIVER
W.S. Elev. 526.1
W.S. Elev. 516.7
Limit of Flooded Area, Elevation 557
Limit of Flooded Area, Elevation 540
Cribwork, Top Elevation 561
Cribwork, Top Elevation 546
Grade Contour 535
Natural Surface
Sectional Elevation Through Centre Line
Ast. NORTH
Note.- In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.

PLATE No 49


Public Works Canada
Georgian Bay Ship Canal
Lower Paresseux Lock Site
Scale of Feet
0 100 200 300 400 500
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway, 22 feet deep from Georgian Bay to Montreal
A St Laurent A.M.Can.Soc.C.E.
Engineer in Charge
C R Coutlee Can.&Am.Soc.C.E.
S J Chapleau. A.M.Can.&M.Am.Soc.C.E.
District Engineers
MATTAWA RIVER
W.S. Elev. 532.
Cribwork top Elevation 621
Cribwork top Elevation 561
Crest Elevation 621
Limit of Flooded Area Elevation 617
Limit of Flooded Area Elevation 557
Sectional Elevation Through Centre Line
Natural Surface
Note.-In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation


Public Works Canada
Georgian Bay Ship Canal
Upper Paresseux Lock Site
Scale of Feet
0 100 200 300 400 500
BELL LAKE
W.S. Elev. 654
Cribwork top Elevation 681
Cribwork top Elevation 621
Limit of Flooded Area Elevation 677
Limit of Flooded Area Elevation 617
Sectional Elevation Through Centre Line
Natural Surface
Note.-In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.


Public Works Canada
Georgian Bay Ship Canal
North Bay Lock Site
Scale of Feet
100 200 300 400 500
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway, 22 feet deep from Georgian Bay to Montreal.
A. St. Laurent, A.M. Can. Soc. C.E., M. Inter Ass'n. of Nav. Con. Engineer in Charge
C.R. Coutlee, Can. & Am. Soc. C.E.
S.J. Chapleau, A.M. Can. & M. Am. Soc. C.E. District Engineers
Note.- In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.
Sectional Elevation Through Centre Line
Ast. North
W.S. Elev 655.5
JENNINGS LAKE
Cribwork, top Elevation 652
Cribwork, top Elevation 657
Limit of flooded Area Elevation 677

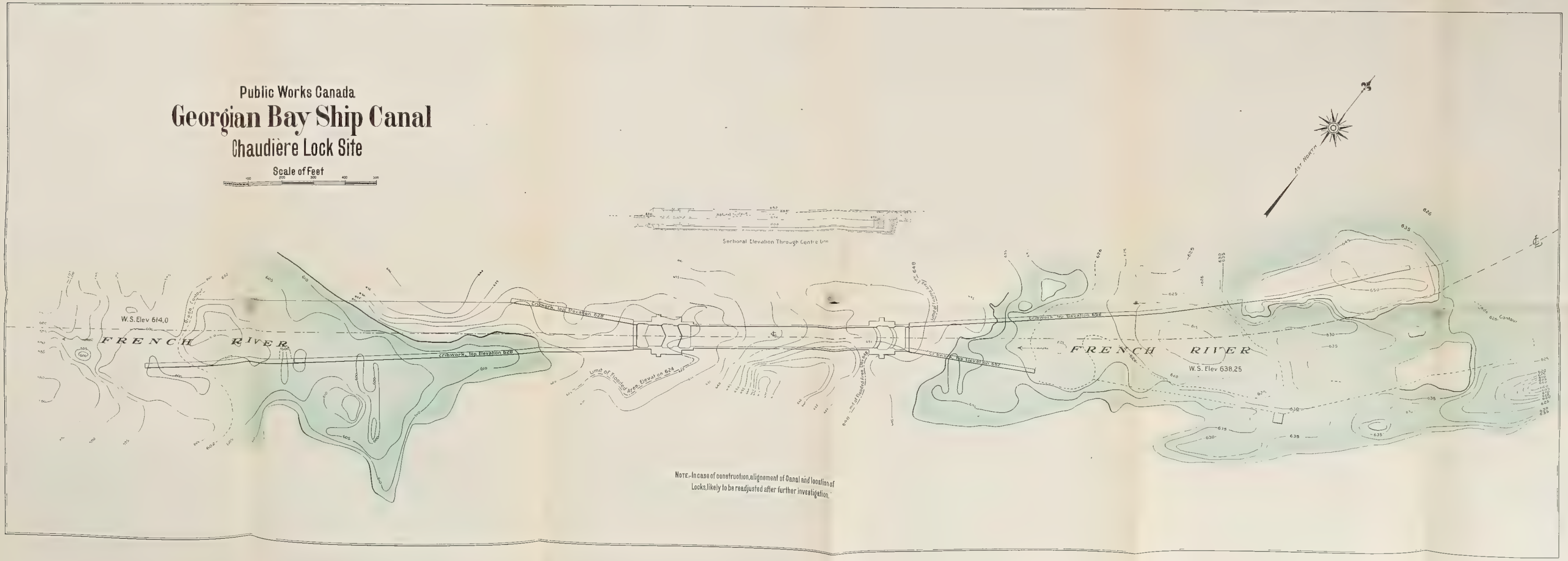
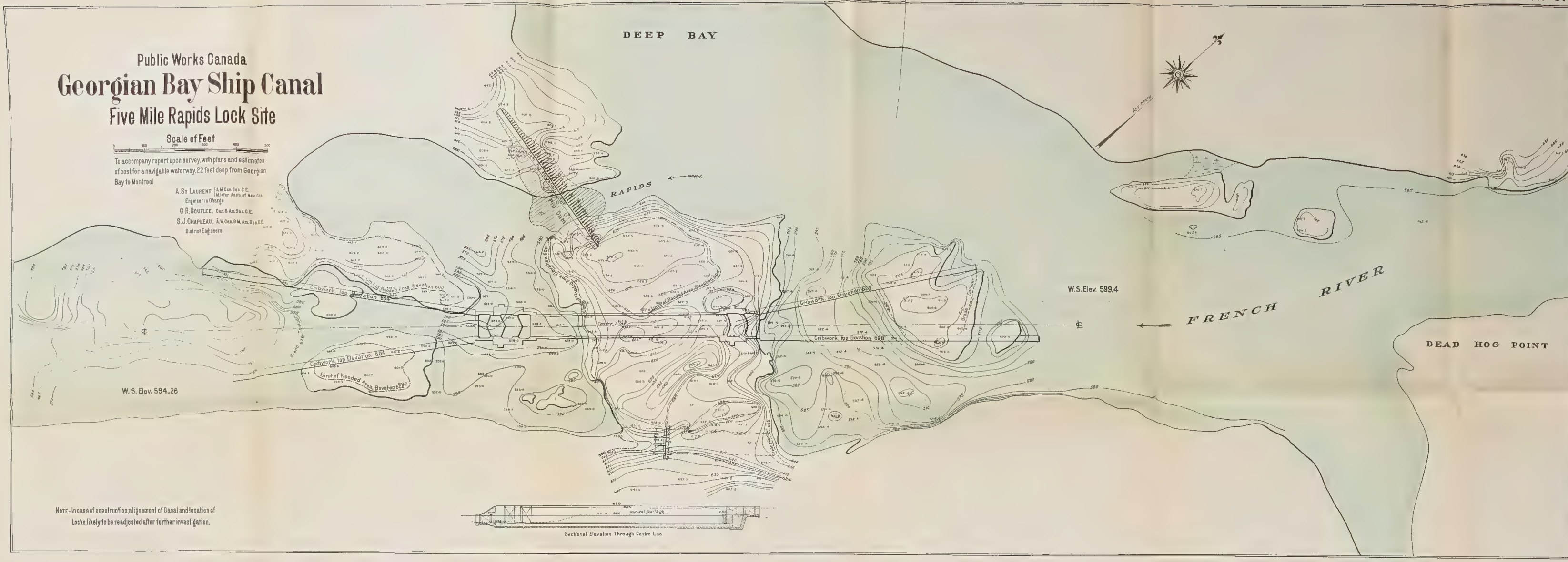
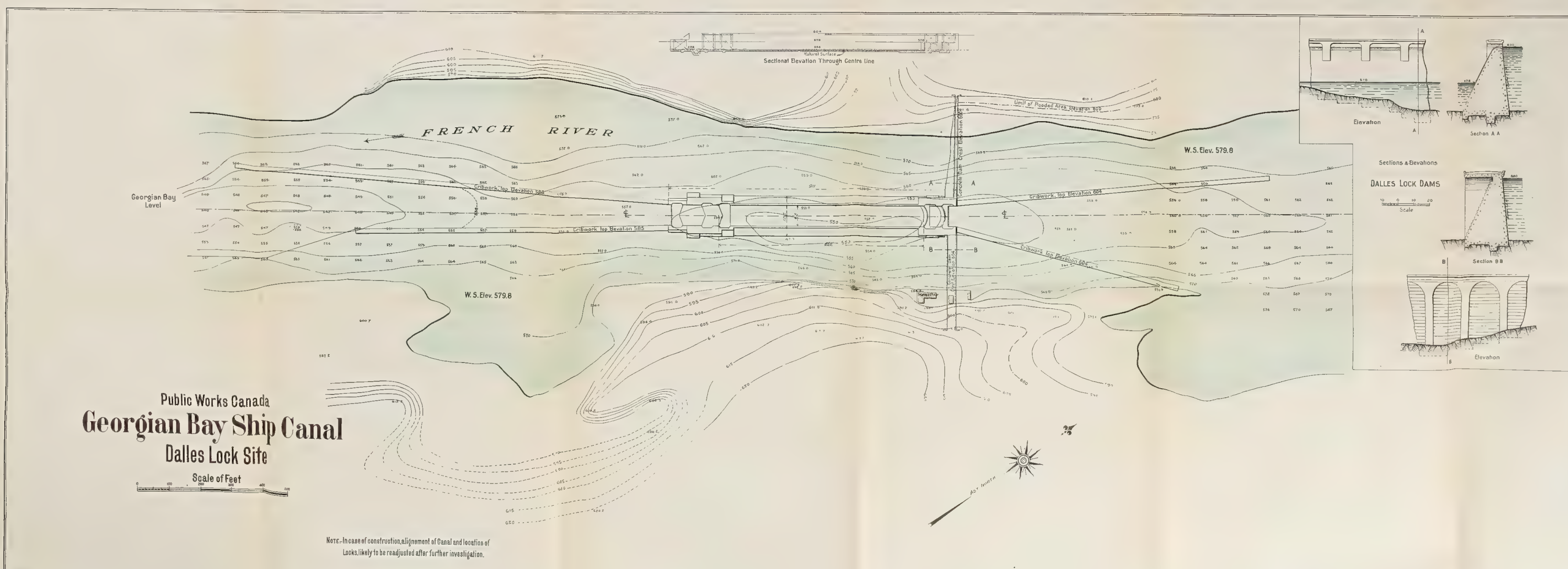

Public Works Canada
Georgian Bay Ship Canal
Chaudière Lock Site
Scale of Feet
100 200 300 400 500
Sectional Elevation Through Centre Line
Ast. North
W.S. Elev 614.0
FRENCH RIVER
Cribwork, top Elevation 628
Limit of Flooded Area, Elevation 624
FRENCH RIVER
W.S. Elev 638.25
Cribwork, top Elevation 652
Note.- In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.

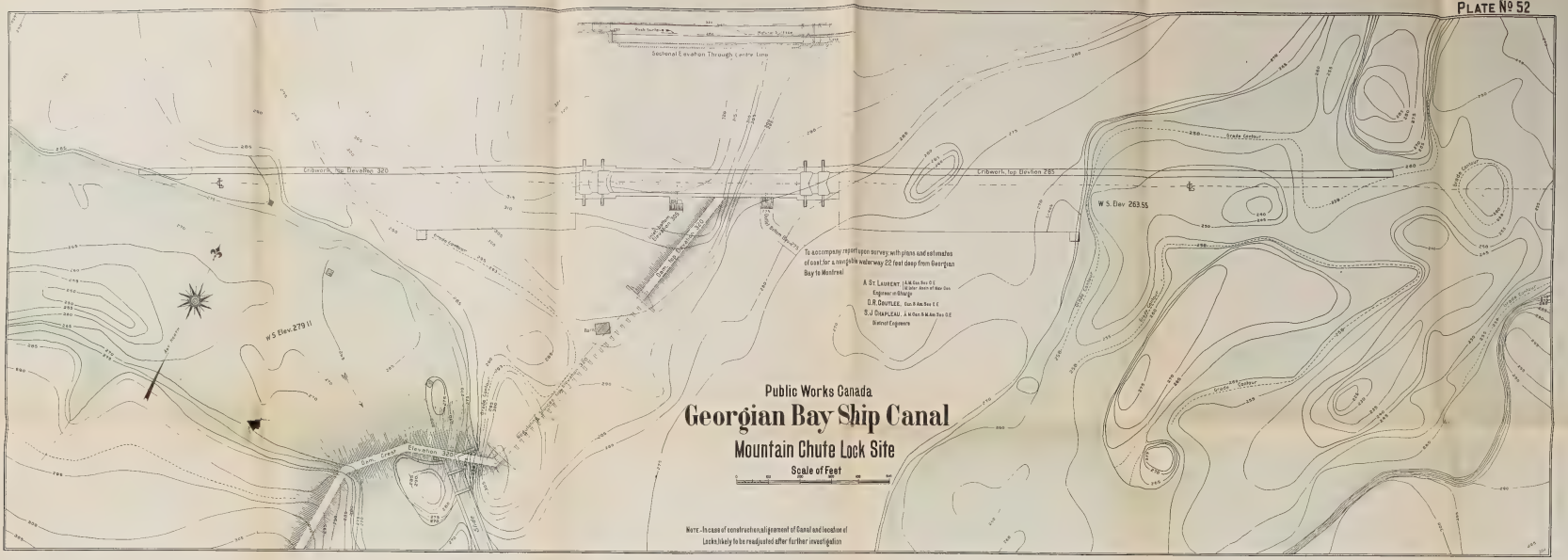
PLATE № 51



Public Works Canada
Georgian Bay Ship Canal
Five Mile Rapids Lock Site
Scale of Feet
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway, 22 feet deep from Georgian Bay to Montreal
A. St Laurent
Engineer in Charge
C. R. Coutlee
S. J. Chapleau
District Engineers
DEEP BAY
RAPIDS
FRENCH RIVER
DEAD HOG POINT
W. S. Elev. 599.4
W. S. Elev. 594.26
Cribwork, top Elevation 604
Limit of Flooded Area
Sectional Elevation Through Centre Line
Note.-In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.



Sectional Elevation Through Centre Line
FRENCH RIVER
Georgian Bay Level
W. S. Elev. 579.8
W. S. Elev. 579.8
Cribwork, top Elevation 585
Cribwork, top Elevation 604
Limit of Flooded Area
Elevation
Section A A
Sections & Elevations
DALLES LOCK DAMS
Scale
Section B B
Elevation
Public Works Canada
Georgian Bay Ship Canal
Dalles Lock Site
Scale of Feet
Note.-In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.


Sectional Elevation Through Centre Line
Crib work, Top Elevation 320
Crib work, top Elevation 285
W S. Elev 263.55
W S Elev 279 11
To accompany report upon survey with plans and estimates of cost for a navigable waterway 22 feet deep from Georgian Bay to Montreal
A St Laurent
O R Coutlee
S J Chapleau
Public Works Canada
Georgian Bay Ship Canal
Mountain Chute Lock Site
Scale of Feet
Note - In case of construction alignement of Canal and location of Locks likely to be readjusted after further investigation


ISLAND
ISLAND
Grist Mill
SAND BAR
ISLAND
ISLAND
ISLAND
W S Elev 338 3
W S. Elev 314 4
W S. Elev 266 71
W S. Elev 301 0
W S Elev 290 6
W S Elev 337 9
W S. Elev 296 3
W S Elev 305 1
W S Elev 341 3
Timber Slide
Timber Slide
Timber Slide
Crib work top Elevation 320
C A L U M E T I S L A N D
Public Works Canada
Georgian Bay Ship Canal
Bryson Lock Site
Scale of Feet
Note - In case of construction alignement of Canal and location of Locks likely to be readjusted after further investigation

To accompany report upon survey, with plans and estimates of cost for a navigable waterway 22 feet deep from Georgian Bay to Montreal.

A. ST. LAURENT, M. Can. Soc. C.E.
Engineer in Charge

G. R. COUTLEE, Ex-M. Am. Soc. C.E.

S. J. CHAPLEAU, M. Can. Soc. C.E.
District Engineer

HUMPHREY ISLAND

W.S. Elev. 345

Limit of Flooding Area, Elevation 355

Gates

Cribwork Top Elevation 355

Limit of Flooding Area, Elevation 345

Limit of Flooding Area, Elevation 370

Sectional Elevation Through Centre Line

Note.—In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.

Public Works Canada

Georgian Bay Ship Canal

Waltham Lock Site

Scale of Feet

0 100 200 300 400 500

Sectional Elevation Through Centre Line

Road

Cribwork Top Elevation 355

Inlet Bottom Elevation 355

Cribwork Top Elevation 375

Outlet Bottom Elevation 345

Limit of Flooding Area, Elevation 355

Road

Note.—In case of construction, alignement of Canal and location of Locks, likely to be readjusted after further investigation.

Public Works Canada

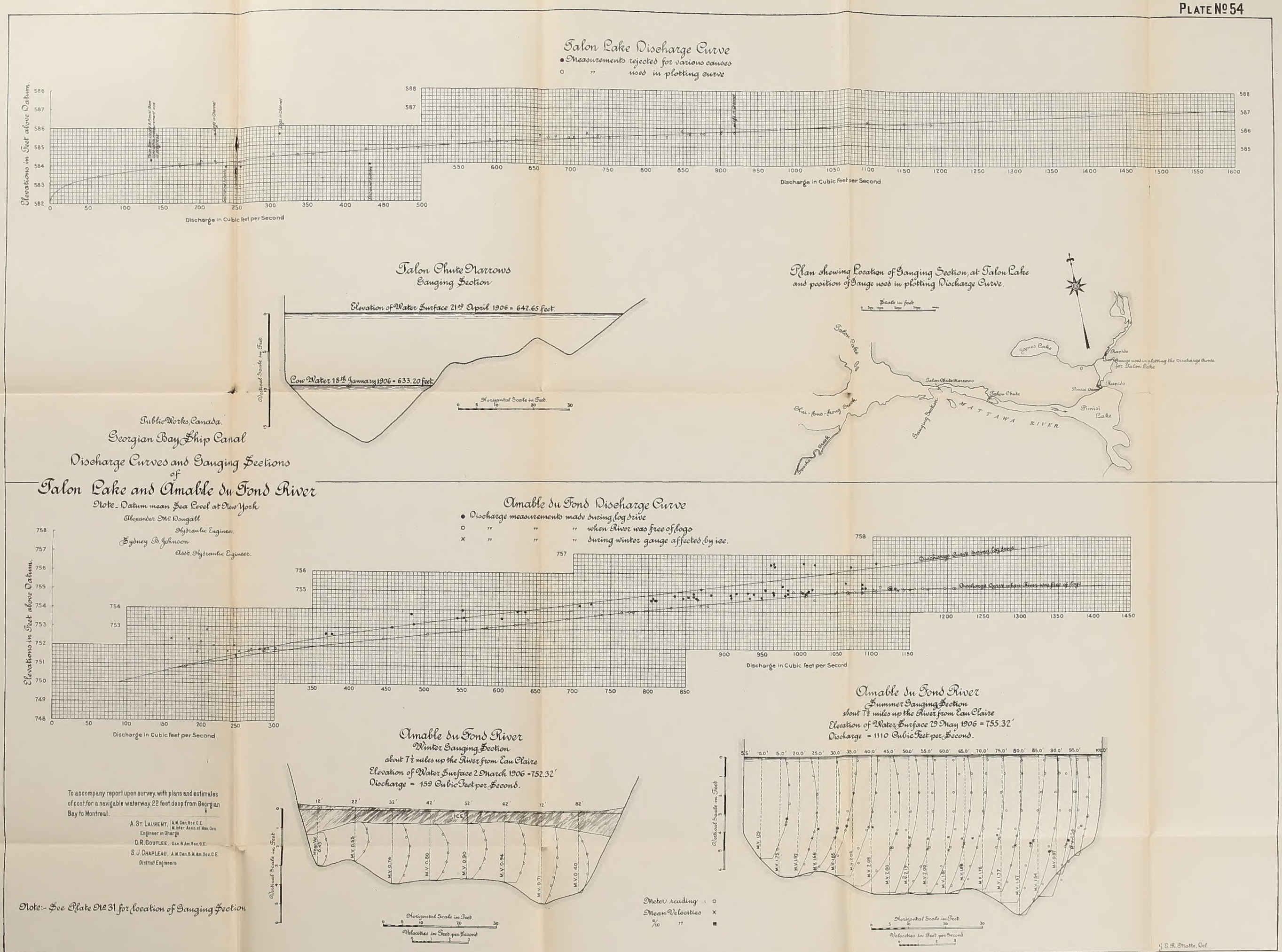
Georgian Bay Ship Canal

Westmeath Lock Site

Scale of Feet

0 100 200 300 400 500

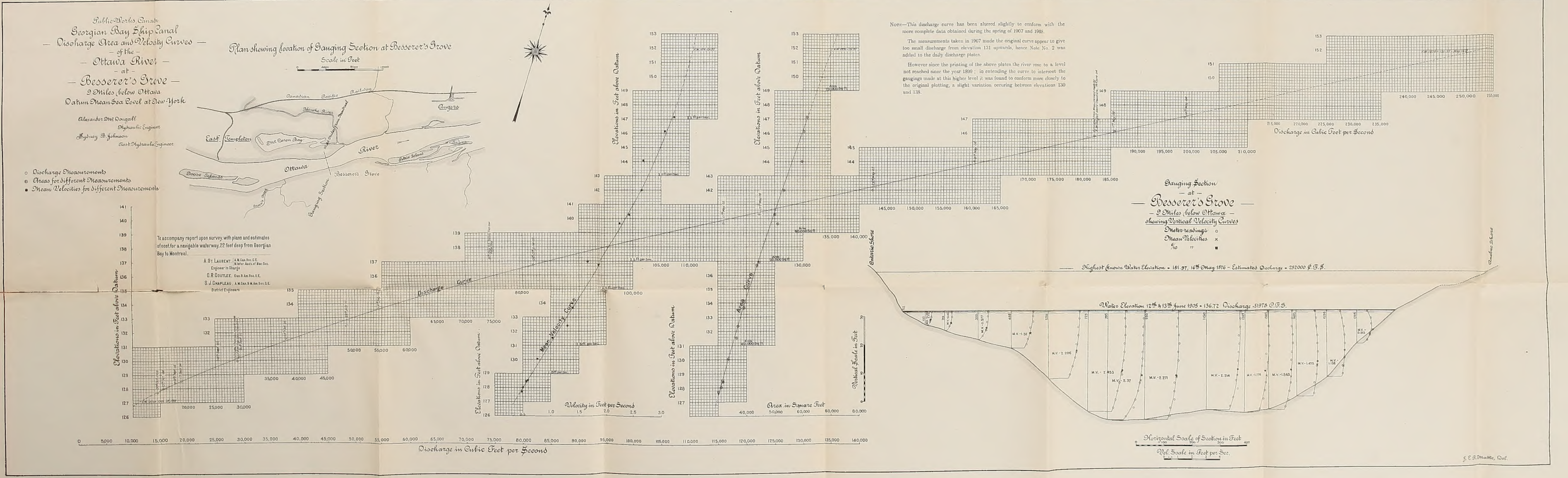
PLATE No 54



Talon Lake Discharge Curve
• Measurements rejected for various causes
○ " used in plotting curve
Elevations in Feet above Datum.
Discharge in Cubic Feet per Second
Talon Chute Narrows
Gauging Section
Elevation of Water Surface 21st April 1906 = 642.65 feet.
Low Water 18th January 1906 = 633.20 feet.
Vertical Scale in Feet
Horizontal Scale in Feet
Plan shewing Location of Gauging Section, at Talon Lake and position of Gauge used in plotting Discharge Curve.
Scale in feet
Talon Lake
Tomes Lake
Rapids
Gauge used in plotting the Discharge Curve for Talon Lake
Talon Chute Narrows
Talon Chute
Pimisi Lake
Gauging Section
MATTAWA RIVER
Public Works, Canada.
Georgian Bay Ship Canal
Discharge Curves and Gauging Sections of
Talon Lake and Amable du Fond River
Note _ Datum mean Sea Level at New York
Alexander McDougall
Hydraulic Engineer.
Sydney B. Johnson
Asst. Hydraulic Engineer.
Amable du Fond Discharge Curve
• Discharge measurements made during log drive
○ " " " when River was free of logs
× " " " during winter gauge affected by ice.
Discharge Curve during log drive
Discharge Curve when River was free of logs
Elevations in Feet above Datum.
Discharge in Cubic Feet per Second
Amable du Fond River
Summer Gauging Section
about 7½ miles up the River from Eau Claire
Elevation of Water Surface 29 May 1906 = 755.32'
Discharge = 1110 Cubic Feet per Second.
Amable du Fond River
Winter Gauging Section
about 7½ miles up the River from Eau Claire
Elevation of Water Surface 2 March 1906 = 752.32'
Discharge = 159 Cubic Feet per Second.
ICE
Vertical Scale in Feet
Horizontal Scale in Feet
Velocities in Feet per Second
Meter reading ○
Mean Velocities ×
9/10 " ■
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway, 22 feet deep from Georgian Bay to Montreal.
A. St. Laurent, A.M.Can.Soc.C.E. M.Inter. Ass'n. of Nav. Con. Engineer in Charge
O. R. Coutlee, Can. & Am. Soc. C.E.
S. J. Chapleau, A.M.Can. & M.Am.Soc.C.E.
District Engineers
Note:- See Plate No 31 for location of Gauging Section

PLATE Nº 55


Public Works, Canada.
Georgian Bay Ship Canal
Discharge Curve of the Ottawa River
above
Deux Rivières
Note - Datum mean Sea Level at New York
Alexander McDougall
Hydraulic Engineer.
Sydney B. Johnson
Asst. Hydraulic Engineer.
Plan shewing Location of Gauging Sections
Scale in feet
OTTAWA RIVER
Canadian Pacific Railway
La Veillée Rapids
Deux Rivières
Gauging Section No 1
Gauging Section No 2
Elevations in Feet at Mock
Discharge in Cubic feet per Second
Estimated L.W. flow
Oct. 6th/05
July 31st/05
May 15th/05
May 11th/06
May 19th/08
June 1st/08
May 22nd/08
Estimated Flood Flow
H.W. 1904
To accompany report upon survey, with plans and estimates of cost for a navigable waterway 22 feet deep from Georgian Bay to Montreal.
A. St. Laurent, A.M.Can.Soc.C.E. M.Inter.Ass'n of Nav.Con. Engineer in Charge
C.R. Coutlee, Can.& Am.Soc.C.E.
S.J. Chapleau, A.M.Can.& M.Am.Soc.C.E.
District Engineers
Gauging Section No 2
Shewing Vertical Velocity Curves
and
Relation between Mean Velocities and Velocities % from the Surface.
Meter observations o
Mean Velocities x
Velocities at % of total depth below the Surface ■
Elevation of Water Surface 10th June 1908 - 491.66
Discharge - 81641 Cubic feet per Second.
Vertical Scale in Feet
Horizontal Scale in Feet
Velocities in Feet per Second


Public Works Canada
Georgian Bay Ship Canal
— Discharge Area and Velocity Curves —
– of the –
– Ottawa River –
– at –
— Besserer's Grove —
9 Miles below Ottawa
Datum Mean Sea Level at New-York
Alexander McDougall
Hydraulic Engineer
Sydney B. Johnson
Asst Hydraulic Engineer
Plan shewing location of Gauging Section at Besserer's Grove
Scale in Feet
Canadian Pacific Railway
Angers
Blanche River
East Templeton
McCaron Bay
River
Ottawa
Petrie Island
Goose Islands
Besserer's Grove
Gauging Section
○ Discharge Measurements
◉ Areas for different Measurements
• Mean Velocities for different Measurements
To accompany report upon survey, with plans and estimates of cost, for a navigable waterway, 22 feet deep from Georgian Bay to Montreal.
A. St. Laurent, A.M. Can. Soc. C.E., M. Inter. Ass'n. of Nav. Con. Engineer in Charge
O.R. Coutlee, Can. & Am. Soc. C.E.
S.J. Chapleau, A.M. Can. & M. Am. Soc. C.E.
District Engineers
Elevations in Feet above Datum
Discharge Curve
Mean Velocity Curve
Area Curve
Velocity in Feet per Second
Area in Square Feet
Discharge in Cubic Feet per Second
Vertical Scale in Feet
Note.—This discharge curve has been altered slightly to conform with the more complete data obtained during the spring of 1907 and 1908.
The measurements taken in 1907 made the original curve appear to give too small discharge from elevation 131 upwards, hence Note No. 2 was added to the daily discharge plates.
However since the printing of the above plates the river rose to a level not reached since the year 1899; in extending the curve to intersect the gaugings made at this higher level it was found to conform more closely to the original plotting, a slight variation occuring between elevations 130 and 138.
Gauging Section
– at –
— Besserer's Grove —
– 9 Miles below Ottawa –
shewing Vertical Velocity Curves
Meter readings ○
Mean Velocities ×
Ontario Shore
Quebec Shore
Highest known Water Elevation = 151.97, 16th May 1876 – Estimated Discharge = 252000 C.F.S.
Water Elevation 12th & 13th June 1905 = 136.72 Discharge 51978 C.F.S.
Horizontal Scale of Section in Feet
Vel. Scale in Feet per Sec.